Money

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PREFACE

THE treatment of money forms a more or less distinct chapter in economics. The phenomena involved are more easily observed and classified than most of the facts of economic life, so that some attempt to state them, and to discuss their theoretic basis, is found even in Greek and medieval writings. A body of theory has grown up, which, while fundamentally identical with the general theory of value, may be developed independently. This small book is an attempt to give enough information to understand the broad characters of the subject, but as it is intended for the non-technical reader, the argument is developed in a somewhat informal way. The aim has been to describe, first; to define and generalize only gradually, as need arises, a precise statement of theory being deferred till near the end.

Accordingly, the first six chapters deal with the ordinary facts about money; chapters seven and eight with important special features that affect the monetary system; chapter nine essays the general ideas necessary to bring the facts into a coherent whole, while chapter ten glances at the application of monetary science to the problems of the future.

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I

Introduction

THE services and the material things which men need are, to a small extent, provided by each person for his own use, and to a larger extent by that communist group, the family, within which no question of mutual payment arises; in a few cases goods are obtained from strangers by direct exchange; but in the modern, complex world, nearly all such requirements are satisfied by means of money. Each person carries about with him a stock of money, or the means to obtain it, so that at any moment he is able to command some of the services and commodities that others are constantly offering him.

Each man, therefore, spends his time in providing some group of things likely to be useful to others, and his income consists in what he succeeds in getting other people to give him in exchange; and takes, in the first instance, the convenient and measurable form of money, though a little of his income will be made up of what he does for himself, and what his family provides for him gratuitously. The income of a community, or of the world, is to be reckoned in the same way, as the sum of all the goods and services obtained by it.

In this process of obtaining things from a stranger, a contract is made, and a debt arises. The debt may be liquidated immediately by the payment of money, or it may remain in existence for a day, a year, or a century. In any case the debt, looked at from the opposite point of view, is a credit; that is, a credit is an uncompleted contract—the creditor has done his part, but the other party has not yet performed his. Now anything which is generally accepted as means of completing contracts, and liquidating debts, is called money. Money arises as a matter of

custom, but in all modern societies it has been crystallized by law; the legislative authority of the community in question ordains that debts may be liquidated by the offer of certain coins or pieces of paper. These are then *legal tender*.

Money is essentially a measure and therefore involves the concept of a unit; this may be defined by law and custom in various ways. It may, e. g., be the value of a gold coin of specified weight and fineness. It might conceivably be defined as the equivalent of a bushel of wheat, or a ton of coal, or, as suggested by a well-known novelist, describing society in the future, as a unit of electric energy. Or the unit may be defined as a note issued by the authority of the national treasury or the central bank. However defined, there must be some unit which is involved in all contracts of sale, and so constitutes the *money of account*, i. e. the money in which accounts are kept. At a given time and place there will be only one money of account—one unit, such as the pound, the franc, the dollar, will be used for all transactions. (Of course a separate name may, for convenience, be given to a fraction of the unit, such as a shilling, a centime, &c.). The definition of the unit, by law and custom, depends on the convenience, the resources, and the theoretical insight of the community employing it.

The functions of money are commonly analysed as being:

(*a*) To act as a standard for measuring the values of other things; value expressed in terms of money is called price.

(*b*) To act as a means of exchange, thus avoiding the need for barter.

(*c*) To serve as a standard for future payments (this is merely emphasizing one aspect of (*a*)).

(*d*) To serve as a store of value (this is not clearly distinguishable from (*b*), since money could not be used as means of exchange unless there were a store of it to draw from).

These functions are, of course, closely intertwined—indeed they are only separable as a matter of thinking; it will, however, be useful to dwell upon first one and then another in expounding the subject.

The definition of the unit plays an important part. In early times it was, naturally, chosen to be some article of merchandise in common use, such as an ox. The only merchandise now retained for the purpose is gold and silver. These metals are pre-eminent because of certain obvious qualities: they have always kept a high value in men's estimation as ornaments, and their desirability and their mechanical properties make them very suitable for forming into coins. The quality, however, that has most contributed to their monetary importance is their facility for indefinite storage. They practically never wear out: the same may be said of iron or stone, but the latter materials when used for a particular purpose can hardly be recovered into general stock, ready to be used again for something else. Gold and silver can be stored so conveniently that the stock in existence is very large. Whereas in the case of corn, or coal, or even iron, the stocks existing in a form available for carrying anywhere and turning to any use, are less than one year's production, the stocks of gold kept ready in the vaults of banks and treasuries amount to twenty times as much as is turned out from the mines in a year: and the same would probably be the case with silver if that metal had not gone out of fashion for monetary purposes.

The consequence of this facility for storage is that the value of gold (and to a less degree silver) fluctuates less from year to year than that of most things. The value of gold is regulated by the same principles of supply and demand as that of any other commodity; but the large stock in existence has the same steadying effect on its value as a reservoir of water has on the rate of flow of a stream.

Silver used to be the more important of the two, and still is

in India and China. In the western world increased wealth has made its use inconvenient, and by common consent it has been relegated to a subsidiary place, gold being accepted as the standard by the leading commercial nations. This means that the units of account are each defined by law as the value of a gold coin of specified weight and fineness. It is true that as a result of the Great War the practical application of this definition was suspended in many countries; but they all continued to do homage to it in the abstract, treating a reversion to the gold standard as the official policy, and some of them have already accomplished that aim.

In a country in which the gold standard is not maintained the unit of account is a piece of paper money. Paper money was originally a promise to pay, on demand, certain gold or silver coins, but banks and governments have sometimes been unable to carry out the promise. Then the paper itself comes to be the standard: for instance, for some years after the war, a pound sterling meant the value of an English currency note. What that value is depends on the circumstances of issue and use of the notes. This will be considered below; meanwhile we may regard the gold standard as the normal basis of money in the world of the present day.

The industrial uses of gold are small, but its prestige as an ornament is so solidly established throughout the world, and by immemorial habit, that the value given to it in this way is as stable as that of the prime necessaries of life. We may conveniently begin our study of money by a discussion of the supply of gold, and what has been done with it.

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Metallic Money

The mechanical problems of coinage were once the centre of interest: they are no longer difficult, and monetary discussion has shifted to other matters.

Most countries express their monetary unit by a gold coin of defined weight, and this constitutes the standard money, but it is not necessarily used in everyday life: most gold is now kept in reserves.

A sketch of the history of gold production shows what becomes of the present output, and how the stock has grown. The bimetallic system broke down, and now silver is only used for token money.

When silver or gold had been chosen by public opinion as the material suitable, on account of its general acceptability, to serve as money, the problem of providing pieces of standard size, conveniently recognizable, became prominent; monetary thought naturally concerned itself with the problems of coinage. In most parts of the world the impress of the sovereign ruler was used to guarantee the weight and fineness of the pieces of metal employed in commerce; and the sovereign regarded the right of coinage as one to be preserved jealously against private interference. Beautiful specimens of coinage dating from Greek, and even earlier civilizations are extant, but their artistic excellence is not equalled by their technical precision: the weight and fineness of the coins are not so accurate as would be demanded now, and moreover they were not protected by their shape from having some of the precious metal scraped off.

The problem of supplying large numbers of coins accurately made, and of such an appearance as to carry their own guarantee against fraud and debasement, is one that presents no difficulties to the resources of this mechanical age, and we have ceased to think about it. But in former times it was difficult, and the monetary stock of every country got into disorder from time to

time. Then arose the questions of a recoinage; who should bear the cost, and whether the new pieces should be as heavy as the old had been originally, or whether they should accept the deterioration that had resulted from wear, clipping, and sweating, and correspond in weight with the average condition of the old currency. The weight of metal corresponding to the national unit (the pound, or the livre for example) was gradually reduced in the course of centuries: this was partly deliberate debasement by impecunious kings who used the credit of their names to get a smaller weight of metal accepted as of the old value, but it was partly an honest attempt to accommodate the coinage to the condition of wear that had arisen spontaneously.

When heavy and light pieces of the same nominal value exist side by side, bullion dealers use the former to send abroad, where they are treated as bullion and valued according to weight, whilst keeping the worn coins for use at home. The tendency for bad coins to drive out good is known as Gresham's law (Sir T. Gresham, a financial envoy of the government of Queen Elizabeth). Thus, if recoinage is neglected, the national money tends to consist only of the worst pieces. During most of the eighteenth century in England gold and silver coins were both valid for payments, but the silver got into such a bad state that it was of no use in foreign exchange, and this fact helped to decide England in favour of gold as exclusive standard (1816).

Either gold or silver, or sometimes both, has been adopted as 'standard', i. e. as definition of the monetary unit. Thus, the English sovereign is made of gold, eleven-twelfths pure, of such a weight that 623 are coined from 160 troy ounces: this implies a content of 7·3224 grammes of pure gold. England is said to base its money on the gold standard when it does, effectively, keep its monetary unit equal in value to that of a defined weight of gold. This was done until the Great War. Similarly, United States money is on the gold standard because a dollar means

a value equal to that of a defined weight (1·50467 grammes) of gold. To ensure the reality of the gold standard two measures are necessary; first, any one possessing gold must be at liberty to take it to the mint and have it turned (gratuitously or for a small fee) into gold coins of the authorized weight and fineness; this will keep the monetary unit from becoming, by any chance, more valuable than the prescribed weight of gold. Second, any one having a claim on the proper authority (usually the central bank of the country) must be entitled to receive payment in gold coins, if he wish, and to do anything he likes with the coins: this will keep the monetary unit from falling below the value of the metal contained in the standard coin.

It will be seen that money is at present organized on a basis of national law. Some day, no doubt, it will be recognized as a matter to be dealt with by a world authority. Meanwhile, the fact that different nations use different systems of money is one of the conditions that gives to international trade a character apart from that of domestic trade.

The example of England in adopting gold 'monometallism' (i. e. using gold only to define the monetary unit) was followed by most other countries in the course of the nineteenth century. Thus, Germany took advantage of its prosperity after the war of 1870 to put its money on that basis. France, and a group of other countries under its leadership, constituting the 'Latin Union', adhered to *bimetallism* for a long time; in other words, the franc was defined either as a weight of gold, or a weight (15½ times as great) of silver. So long as this system was maintained dealers naturally took to the French mint either gold or silver, according to which was more economical for them, with the result that the French currency came to consist at one time almost entirely of silver 5-franc pieces (écus), at another almost entirely of 20-franc gold pieces (napoléons), and 10-franc gold pieces. This inconvenience is inherent in bimetallism, and

towards the end of the century silver became so cheap (relatively to gold) that gold would have disappeared entirely from circulation: the government was forced eventually to abandon bimetallism by closing the mint to the coinage of silver.

A *standard* coin is one whose value depends only on the metal contained in it. Thus the sovereign and the ten-dollar gold piece carry out the legal definition of those units in the metal chosen as standard by Britain and the United States. The antithesis of standard is *token*, i. e. a coin which merely betokens the standard, or a fraction of it, irrespective of its intrinsic value. Thus, a shilling is a token for one-twentieth of a pound, because by law it is exchangeable at that rate: the silver in it is worth much less.

Standard coins can, of course, be used to pay debts of any magnitude: they are said to be *legal tender* to an unlimited extent. Token coins are usually limited in this respect; e. g. in England a debtor has no right to insist on his creditor accepting silver coins for an amount greater than two pounds. In fact, silver and copper money in England exist merely to avoid the impracticability of handling very small pieces of gold. As an exception one comes across cases of token coins having full legal tender rights; this is so with the Indian rupee. It is not a standard coin, for in 1898 India adopted gold as standard money, but the rupee, which is the traditional coin of the Indian people, is still valid by law for payments of any amount. At the time the gold standard was effectively in use in India (from 1898 till the Great War) the rupee was maintained as a token coin equal to one-fifteenth of a sovereign, but sovereigns were little used: rupees were—and are—the ordinary medium of exchange.

China alone of the great nations adheres to silver as standard money: that is, if one buys goods from a Chinese merchant one contracts to give in exchange a certain weight of silver (so many

'taels'). Gold is not money in China; it is merchandise, whose price, like that of anything else, is reckoned in silver.

It is clear that a country may adopt gold (or silver) as its standard of value without actually using the metal as a common means of exchange. The conditions necessary for the maintenance of the gold standard may be scrupulously kept to, whilst the people of the country use bank notes for large payments, and silver, nickel, and bronze coins for small ones. Even in the United States not many actual gold coins are used, although there are immense stores of gold available should any one want gold, for money, for manufacturing purposes, or to send abroad. In India (1898–1914) the gold standard was maintained, not by stores of gold in the country, and by the use of a local mint, but by exchanging rupees against pounds sterling in London. So long as a mechanism was maintained by the Indian Government by which any one could exchange 15 rupees in India for a pound in London, and vice versa, the rupee could not depart in value from one-fifteenth of a pound, beyond a trifling percentage due to expenses of transport; and if English money was on the gold basis, Indian was too. A standard so maintained by the aid of a foreign monetary centre is known as the *gold exchange standard.*

Before the war gold coins were used in large quantities in the leading countries, Britain, France, Germany, United States; though there were others, maintaining the gold standard, where a gold coin was practically never seen. But even where gold coins were in everyday use, large stores were kept in the national treasuries or central banks, for the purpose of exchanging against paper money when asked for; and now nearly all the monetary stock of gold in the world exists in the form of reserves kept by banks and treasuries.

Gold, as merchandise, is, thus, intimately associated with the present monetary systems of the world. This is deplored by some writers, who think it wrong that money should be bound

up with the vagaries of a particular kind of merchandise, and one, too, that they refer to contemptuously as being of no use except for filling hollow teeth. But though more subtle and scientific plans to provide a standard of value are not beyond the capacity of economists to invent, it is unlikely that the world will adopt any of them for some time yet. It is necessary, therefore, to know something of the conditions of supply of the metal to which the world has pinned its faith.

Gold and silver were both mined to a considerable extent in antiquity, but during the Middle Ages some of the mines were exhausted, and owing to the disturbed condition of the world, enterprise was abandoned, the output of the precious metals dropped almost to nothing, and the small stocks that remained in existence came to be of very high value. The total available gold at the date of the discovery of America is estimated at no more than £12 millions to £16 millions worth, or say 100 tons weight.

The discoveries of gold and silver in America, which were the subject of so much romantic history, changed the situation greatly in the course of the sixteenth century. By the end of that period the precious metals were available in an abundance that had rarely been known in ancient times, and never since the fall of the Roman Empire. There was an annual output of gold from the mines of Mexico and Peru of about a million pounds worth a year.

The state of things did not suffer any radical change for more than two centuries: the new gold mined—the silver too, for that matter—was absorbed by the increasing wealth and commerce of the world, but until 1848 there was no new discovery of first-rate importance. In that year the Californian fields were opened up, and almost immediately afterwards those of Australia: these new fields proved so prolific as to raise the output, which still was only two or three millions a year, suddenly,

to twenty-five millions, and in a short time trebled the existing stock of gold available for money. The new mines reached a maximum of productiveness in a few years, and then slowly fell off. Most gold discoveries have been, first, in the form of auriferous river sands; these are quickly used up, especially in modern times, when the discovery, becoming known all over the world, attracts a crowd of diggers. But while the alluvial deposits are being treated, careful exploration usually brings to light rock from which the sand was derived, and then exploitation of the rock begins, with elaborate mechanical appliances, and a much larger expenditure of capital. The source of supply thus opened up lasts considerably longer than the alluvial, but gradually it, too, becomes more difficult to work and less productive.

In the last quarter of the nineteenth century new supplies of gold were again becoming scanty, in relation to the demand then existing, although they were on a far larger scale than before the Californian discoveries. The movement, led by Germany, to adopt gold, to the exclusion of silver, as currency standard, reinforced the demand, which, in any case, was growing fast with the increased commerce and wealth of the world. If no important new source had been opened up, gold would certainly have risen in value so much as to compel public attention to the question of the monetary standard; but about 1886 the extraordinary gold ore deposits of the Witwatersrand were discovered, and in a decade that district became the most productive field in the world. Minor discoveries, in Western Australia, the Klondyke, and elsewhere, helped to create a new period of abundance, and by 1908 (the Anglo-Boer War had caused a temporary check) output rose to £90 millions a year—that is to say, as much gold was mined in two months as constituted the world's known stock at the close of the Middle Ages.

The Great War also checked the production of gold, not, like the Boer War, by direct interference, but by making the cost of

working greater, so that some of the poorer mines no longer pay to work: still, metal to the value of about £75 millions is produced annually. It is of importance to know what becomes of this.

Gold has various uses in the arts besides that of stopping teeth. It is used, e. g., in photography, and in gilding, and in such uses is reduced to such a fine state of division that it would be hopeless to try and recover it in bulk; but the greatest non-monetary demand is still for making ornaments. In this it is not actually used up: gold jewellery is, indeed, occasionally melted and restored to the general stock of metal. But even during the Great War, when governments appealed to patriotic citizens to help the national gold reserves in this way, the effect was small. Ordinarily, one may say that gold converted into ornaments will no longer count as part of the stock for monetary purposes; and the prestige of gold ornament never fails. Although a luxury, the consumption is very steady, and grows as the world becomes more populous, richer, and more luxurious. Statistics of consumption are imperfect, but it would not be safe to allow less than £20 millions a year as needed to meet the demands of industry, even without taking India into consideration.

India is in a position of its own in this matter. All the oriental countries are inclined to lay up hoards of the precious metals, but India far more than the others. Gold and silver, whether coined or in the form of jewellery, occupy such a place in the affections of the Indian people, that they spend a large portion of their scanty incomes in buying them. In years of prosperity the metals are imported on a very large scale. The hoarded gold might indeed be returned to circulation, and in bad years a little is so used, and it has even happened that a small export replaces the customary import; but the habit is tenacious, and as soon as prosperity returns the Indian people resume their accumulation. It is possible that, in time, they may come to

appreciate the advantages of banking, as compared with hoarding money; but at present India must be looked upon as a sort of sink into which the precious metals go without return. Moreover, the population is so enormous that, though individually their means are very modest, Indians have sometimes bought more than £20 millions worth of gold in a year.

If, then, a record be kept of the production of the various mines, and an allowance be made for the amount consumed in jewellery and the other arts using gold, as well as for exports to India, and, on a smaller scale, to other oriental countries, the residue is available to add to the monetary stock of the world. In this way an estimate can be made of the growth of the available stock; and it can be checked from time to time by comparison with the records of gold held in banks and treasuries, together with the gold coins in use among the people—though the last item is very much of a guess. The following figures have been arrived at:

At beginning of	Stock of gold available for money
1851	£ 144 millions
1861	376 ,,
1871	544 ,,
1881	650 ,,
1891	714 ,,
1901	1,000 ,,
1911	1,532 ,,
1921	2,060 ,,

It is seen that the increase of late years has been rapid: indeed more was added in the period 1901–21 than in all the preceding centuries. At the present time, the output being, say, £75 millions a year, and allowing about half of this for use in the arts and hoarding in the east, there remains an amount of new gold equal to 1½ or 2 per cent. of the stock in existence. The stock is accumu-

lating at that rate, and the most important question affecting gold is whether the world's demand for it is increasing faster or less fast than that.

The war led to a general use of paper money, governments using all their efforts to get gold deposited in the treasuries and central banks, where they could lay hands on it if need be. This movement went so far that gold coins are now hardly seen anywhere except in a few spots: Mexico, Cuba, and the Pacific coast of the United States being the most noteworthy. The great peoples of Britain, France, and Germany who in former times used gold coins freely, content themselves with paper, and it is uncertain whether they will ever take to gold again. But in the less advanced parts of the world, especially those that have suffered much from abuse of paper money, it is probable that the preference for 'hard' money remains, and that people will use it when they get the chance. There can be no doubt that large stores of gold lie hidden in Russia, East and South Europe, and Asia.

An estimate is published annually by the Unites States Mint, and according to this authority, at the beginning of 1923 the known stocks of gold coin and bullion in banks and national treasuries were £1,877 millions. After allowing for the small amount of gold coin in active circulation, this leaves a considerable residue to be accounted for, chiefly as hoards in various parts of the world.

Silver has come to occupy in monetary affairs only the minor, though useful, place of supplying small change. This is, no doubt, principally a consequence of the wealth of the western world, which has made the weight of silver needed for ordinary transactions inconveniently large. The attempt to maintain a bimetallic standard, made by France and some other countries, was the subject of much excited discussion for a while, especially at the time, about 1870–90, when the gold supplies were really

inadequate to the growing needs of commerce. The system broke down because the price of silver fell seriously. The weight of silver exchangeable for gold depends, of course, on the conditions of demand and supply of the two metals, and will not spontaneously remain constant, any more than the price of tin or of lead. If a nation undertakes to exchange a fixed weight, such as 15½ ounces of silver for one of gold, this will constitute a strong steadying demand, and will neutralize minor influences tending to cause the commercial rate of exchange to become higher or lower than that standard. But if the departure of the economic conditions from that represented by the official price is great and prolonged, bimetallic currency will be depleted of the dearer metal, and there will be nothing to prevent the price of the cheaper from following its natural course. This is what happened to silver: the London price long remained close to 61*d.* per ounce, which corresponds with the official ratio of the Latin Union, but, when the countries in that Union were forced to close their mints to silver, the price fell persistently, and even touched 21*d.*

Bimetallism is no longer a problem of active interest: monetary discussion ranges round other questions. But among the consequences of the fall in the value of silver may be noted its influence on Indian policy. The rupee used to be a standard coin, but its value fell so seriously between 1870 and 1893 that the Indian Government was driven to close the mint to the free coinage of silver, and to adopt the gold-exchange system, whereby rupees were exchanged at a fixed rate against English money; this meant the adoption of gold instead of silver as standard, the rupee becoming a token coin.

3

Paper Money

Paper money originated as receipts for precious metal deposited with bankers; but soon developed into a system of promissory notes based on credit, so convenient and profitable that it led to abuse, and compelled the state to regulate issues.

Examples of important varieties of paper money, showing in what ways bank- and state-credit are involved in them. Credit has sometimes failed, and the issue become inconvertible and depreciated: examples of this.

A depreciated issue may be restored either by devaluation or by deflation.

Paper money has value in itself, apart from any prospect of conversion into gold.

EVEN coined money is not altogether self-dependent in value. Standard coins are so, but token coins, such as the silver in common use, involve an element of credit; that is, their value is due partially to the trustworthiness of a promise made by the issuing authority—the promise to exchange them, on demand, for standard coins.

Paper money is entirely dependent on credit. It consists, normally, of promises to pay coin, to the bearer, on demand. Paper money has nearly always originated in such promises, but it has sometimes happened that the issuing authority has defaulted, and yet the paper continues to circulate and possess value. Hence the distinction, the most important distinction to be drawn with regard to paper money, between convertible and inconvertible. Paper money is *convertible* when the holder can, in actual practice, obtain the amount of gold or silver stated on the face, and do what he likes with the precious metal. So long as that is the case there can, clearly, be no difference in value between the piece of paper money and the coins it represents.

Paper money may be inconvertible because the issuer throws

various difficulties in the way of conversion, or refuses altogether to convert, or even because there never was any intention to convert it into coin. Indeed, a country might abandon the precious metals altogether, and treat its notes as the only standard money; and though no country has done this in the full legal sense, many countries have, in fact, used paper money with no prospect of conversion.

Paper money apparently came about, in the first instance, as receipts given by bullion dealers or bankers for precious metal deposited with them. Such certificates of deposit could be transferred from one person to another, any holder being entitled to reclaim the precious metal. They then served as means of payment, and had the advantage of saving the trouble of handling the metal: they became much more convenient as circulating media when made out in uniform round sums.

Some centuries ago, when bank notes first became common, metallic currencies were very disordered, so that expert knowledge was needed to evaluate the numerous patterns of coin, mostly worn and defaced, especially in centres of international trade. The notes of a reputable bank then possessed the additional advantage of uniform and full value. The Bank of Amsterdam in particular was able to effect a great monetary improvement in the seventeenth century, so that merchants preferred payment in the credit money of the bank to payment in gold or silver.

If no further development had occurred it is probable that a good deal of the gold used for monetary purposes would have been replaced by such bank notes, merely to avoid the clumsiness of handling large sums in coin. But it soon became apparent that bankers could issue promissory notes payable on demand for an amount exceeding the coin and bullion they had on hand, for only a fraction of the notes would be returned for payment. Thus, if a merchant asked the banker for a loan on the security of a bill of exchange or other property, the banker could safely

hand him a bundle of notes, which the merchant could use to pay his expenses. The banker received interest on the loan, although he had lent nothing but his credit in the form of promissory notes. The notes were, in fact, a creation of new money; the transaction was successful provided the banker was cautious enough not to overdo it, and to keep in a position to redeem any notes actually presented to him.

Business is still sometimes done in this fashion, although in the more advanced countries the use of current accounts and cheques has rendered it largely obsolete. But even if every one had a bank account, there would still be a use for paper money, because a cheque depends on the credit of the drawer, whilst a note depends on that of a government or a bank, which is widely known. Paper money is therefore accepted from strangers, while cheques are not.

Paper money has, thus, been issued mainly by banks, and being a profitable business the issue of it is commonly carried as far as is practicable: indeed it has often been attempted by traders who have no claim to the dignity of being called bankers. This has led, in the past, to so many instances in which the issuer has failed, and the public been defrauded, that every civilized country has introduced legislation to control and safeguard the issue. This is mostly done by restricting the right to a central or national bank, and that only under clearly defined regulations: sometimes government has taken the business into its own hands. There is a growing tendency to claim the profit obtained by the issue of paper money as due to the state, on the ground that it arises from the action of the public.

Both bank and government notes have often been constituted 'legal tender', i. e. creditors are bound to accept them in settlement of a debt. There is no harm in this so long as they are issued with due precaution, and not made legal tender for the issuing authority. Thus, in England any person has the right to

pay in Bank of England notes; but the holder can go to the bank and exchange them for gold. The bank itself can only pay with its notes by consent of the payee. If the issuing authority were allowed to use its notes as legal tender, that would be equivalent to making them inconvertible.

In framing regulations about paper money the first point to attend to is the nature and extent of the *fiduciary* issue. This means the part of the issue which is not covered by an actual store of precious metal, held with a view to converting the notes. There are issues which are not fiduciary at all: the notes are simple certificates of deposit of gold (or silver), and the metal is kept ready to pay out again on demand. The United States Treasury issues such certificates, in denominations of ten dollars and multiples of that amount; they are extensively used as money in the United States, because people find them more convenient than gold coins. There is, of course, no profit in the issue, since no use is made of the gold deposited. Indeed, a certain expense for printing is incurred, though, from the national point of view this is fairly balanced by the saving in wear of the gold: coins in use necessarily suffer some abrasion, stored in a vault they remain fresh.

Mostly the issuing authority wishes to make some profit on the issue, and so gold is only held against part of the issue. Thus, the Bank of England is allowed by law to issue the fixed amount of £19,750,000 of notes in addition to the coin and bullion it holds. This is a small amount: since 1844, the date of the Act of Parliament regulating the issue, the public has never failed to require more notes than the amount of the fiduciary issue, so that no occasion could arise on which the bank would be unable to fulfil its obligations to convert.

The Bank of France has been left much more to its own discretion as to the issue of notes, although they play a larger part in commerce than is the case in England, because payment by

cheque is not popular. The law merely imposes a maximum limit to the whole paper issue, and leaves the bank to provide as much metallic reserve as it thinks proper. The Bank of France has always acted in a sound and conservative way, and until the war upset French finance it usually kept a reserve equal to more than two-thirds of the issue—an ample safeguard.

In the United States there is no central bank, but a system of twelve 'Federal Reserve Banks' has been established, in suitable towns, together with a Board that controls their general policy. They are authorized to issue notes, against which they are required to keep at least 40 per cent. in gold or gold certificates, and the remainder in commercial bills of exchange of the highest quality. This is an example of the proportional method of limitation of the fiduciary issue. It means that for every dollar of gold acquired the circulation of notes may be extended by 2½ dollars, and conversely, if the reserve is at the legal minimum, for every dollar in gold the banks part with they must contract their circulation by 2½ dollars. The Federal Reserve Banks have come into possession of most of the gold in America—a stock abnormally swollen by importation from the rest of the world during and after the war. In consequence of this they have been able to keep a much larger reserve than required by law, so that the surplus over legal requirement, being freely at their disposal, is a real reserve that may be drawn upon without affecting the circulation. The proportion of gold kept against liabilities has, in practice, been as high as that adopted by the Banks of England and France.

British currency notes were issued by the Treasury in the crisis of August 1914, primarily to meet the demand for cash that always arises in a crisis. The issue was then extended in order to exchange against sovereigns and half-sovereigns, it being the policy of the government to collect as much as possible of the gold in the country where they could make use of it. This resulted

in a larger stock of the notes coming into circulation, but the issue was extended even further, without any excuse, except that the government wanted money. No provision was made for conversion, and the only safeguard as to amount of issue was that adopted after the war, on the recommendation of a committee presided over by Lord Cunliffe; it is that the fiduciary issue in any year shall be limited to the maximum fiduciary issue of the preceding year. So long as this rule is adhered to, the issue cannot increase, and if there is a decrease in any year, that decrease is made permanent. These notes are a fair sample of war money; much worse instances of arbitrary and excessive issue can be found among European nations. The fiduciary issue was not, originally, limited either to a fixed amount or to a fixed multiple of the gold reserve.

A feature of some interest, in paper money issues, is the smallest denomination allowed. Bank of England notes were not issued for less than five pounds, so that silver and copper alone do not serve conveniently as change for notes; up to the war the gap was filled by gold sovereigns and half-sovereigns, which circulated in large quantity. In America notes for one dollar are used freely, silver dollars being regarded as cumbersome. On the continent of Europe the break-down of the monetary systems during the war went to such an extent that most coins disappeared, and notes were used even for amounts as small as a penny. The re-introduction of coins, such, for instance, as the attractive-looking French franc, made of aluminium-bronze, has been regarded by most people as a real gain in comfort as well as in cleanliness.

Most paper money issues, except when due to the emergency of war, are those of banks. Notes issued by governments have acquired a bad reputation, because it has so often happened that a Treasurer in difficulties has abused the system, and issued notes in such excess that they became depreciated, or even quite worth-

less. Bank notes have, on the whole, been more trustworthy, because in normal times banks, being subject to the law, can be kept to their obligations, and indeed for their own reputation, will do all they can to avoid default; though if the financial situation of a country becomes desperate, the government is almost sure to drag the banks down with it.

However, in peace time the financial stability of governments tends to grow more secure than it used to be, and they can better be trusted with the function of note issue. Good examples are to be found in India and Australia. In the former, government undertook note issue, as the banking system was little developed and had had various reverses; the Indian people were more ready to accept paper money, the notion of which was unfamiliar to them, at the hands of the government, whose financial integrity is unimpeachable, than from the banks. In Australia there was no difficulty as to trustworthy banks, but popular sentiment considered that the issue of paper money was a proper function of government, and that the profits of it should not accrue to private companies. When banks accept deposits they are receiving loans from their own customers, but when they issue notes, they are receiving loans, free of interest, from any member of the public who holds a note, and that is an advantage which—it may reasonably be argued—they have no claim to.

Whilst the forms of paper money described above are, in their normal working, convertible into coin, inconvertible paper has played a great part in monetary history. Every country that has used paper money—and every country with a claim to be called civilized has done so—has defaulted on it, at some time or another.

Banks have failed, sometimes, to meet their obligations, and have caused loss to their note-holders, but there has been a general recognition of the need for restricting the right of issue to well-established banks, and if one of these were to suspend payment,

it is probable that arrangements would be made, in the public interest, to transfer the liability to the central bank or to the state, so that the notes should not be dishonoured.

If doubts arise as to the solvency of a bank, note-holders and depositors will demand cash from it in exchange for their claims, and the process may go so far that the bank has no cash left. When such a 'run' occurs and the bank defaults, it may be because it is actually insolvent, i. e. its liabilities exceed its assets, but it is more likely to be due to inability of the bank to turn its assets into cash quickly enough to pay with. The chance of the latter kind of failure has, however, become less in the case of an ordinary commercial bank, because nowadays it would rely on the central bank of its country for a supply of cash, and with modern methods of communication and transport, there should be no difficulty in supplying cash to any solvent bank with sufficient rapidity.

A run on the central or national bank is unlikely, for it would imply want of confidence in the nation itself or its government. If such an incident did occur no doubt the government would meet the situation by declaring the paper money inconvertible for the time (' relieving the bank from the obligation to convert '). The paper would not become valueless in consequence of this; it would probably fall to a discount as compared with gold coin, but if nothing were done to aggravate the situation it might recover. Troubles of this sort, however, more often arise in consequence of a demand for gold for export. The trade situation may call for payment of money to foreign countries, and as paper money does not circulate outside the country issuing it, to any important extent, gold has to be remitted. The gold is naturally demanded from the central bank, as that is the most accessible source. The bank will, accordingly, watch such demands narrowly, and become anxious if the gold reserve falls very low.

Usually such a foreign drain is checked by the natural reactions

of trade, and gold will in time flow back to the disturbed country, unless circumstances prevent it. The drain, due, e. g., to a long and costly war, might be so serious as to exhaust the gold reserve altogether ; or else, before that happens, the bank or government may take fright and suspend conversion. In either case a régime of inconvertible or 'forced' paper currency is introduced : the paper has driven out all, or at least all the available, gold, and then gold is almost certain to be sought for by the offer of a premium as compared with currency, so that depreciation, if not actually synonymous with inconvertibility, practically always goes with it. What happens later depends chiefly on the policy of the issuing authority when the paper is no longer convertible.

During the Napoleonic wars English paper money, consisting chiefly of Bank of England notes, was inconvertible for a good many years ; but the bank was very moderate and discreet in dealing with the situation. There was depreciation, but at the worst bank notes only fell to 71 per cent. of their nominal value in specie, and mostly their value was much nearer to par. No great difficulty was experienced in restoring the old standard a few years after the war ceased. A really valuable legacy from those times is to be found in the discussions which the depreciation raised : the writings of Ricardo, and the report of a Select Committee of the House of Commons (June 1810) on the 'High price of bullion', no doubt largely inspired by Ricardo, made the matter clear, once for all. Unfortunately for the world, when another war, a century later, created the same difficulties, the lessons of the former time were ignored, and the political and commercial communities had slowly and painfully to recover from mistakes that might have been avoided if the record of earlier experience had been attended to.

British paper currency remained strictly convertible from 1821 to 1914. It is well to note that convertibility, to secure a paper currency from depreciation, must be genuine : there must not

only be the legal right, but freedom from practical difficulties. If trouble, delay, or expense be incurred, the convertibility cannot be regarded as real. In France the Bank retained and sometimes exercised the right to pay in silver: in the United States the gold standard was not unequivocally adopted until 1900; and in Germany it was commonly said that the Imperial Bank looked askance at customers who made large demands for gold. In England no such difficulties existed, so that any one possessing claims on the Bank (whether in the form of notes or otherwise) could get gold in any quantity, immediately, and without reserve. In consequence of this, London became the recognized gold market of the world.

There is, further, the condition that a person obtaining gold must be at liberty to do what he likes with it—melt it or export it at his pleasure; otherwise gold coins and gold bullion are not identical in value. The fact that restrictions on the use of gold interfere with its value has been prominent in the recent years of war; but it was perfectly known in earlier times when governments interfered with the freedom of commerce. Thus the Bullion Report of 1810 says: 'There is said to be at present a difference of between 3 and 4 shillings per ounce between the price of bar gold which may be sworn off for exportation as being foreign gold, and the price of such bar gold as the dealer will not venture to swear off' (i. e. guarantee not to have been melted from English coin).

Depreciation of a national money always shows itself on the foreign exchanges. A century ago the price paid for English money in Hamburg or Amsterdam was the test: during the Great War the quotation of the pound sterling in American dollars served to indicate its value. The new currency notes were nominally convertible, but difficulties of sea transport hindered export transactions, and it was not for some time clear whether English money had retained its full value or not: later,

the export of gold was forbidden. New York exchange fell after the war had been proceeding for a year or so: the British Government then took into its own hands exchange operations needed to maintain the rate, and it was only after the war, in 1919, when the market was left to itself that it was generally recognized that an English paper pound was worth less than a sovereign. The lowest point touched was 69 per cent. in February, 1920.

It is easy to understand why the value of the pound was not maintained, when the statistics of issue are considered. Before the war the British Isles used money in the form of gold, silver, and copper coins, Bank of England notes, and the notes of Scotch and Irish banks to a total value of a little under £200 millions. In the war period currency notes alone were issued to the extent of £350 millions, so that with other items, the total money in circulation was quite two and a half times as much as in 1913.

In America, in early times, there was much experience of inconvertible paper, indeed the paper money of the colonies was more often depreciated than not; and when during the War of Independence the provisional government of the continent attempted issues on behalf of the federated colonies, the result was such a complete failure that the phrase 'not worth a continental' sprang up as an expression of the worthlessness of such money.

Since the establishment of the American Union, their worst experience was the depreciation of paper currency ('greenbacks') during the civil war of 1861–5; it took fourteen years after the close of the war to restore parity. The American Government did not at any time interfere with free dealing in gold: this was wise, and had the advantage of bringing the fact of depreciation clearly into notice, for the price of gold in paper dollars was quoted daily in the New York market. Gold rose at one time to a premium of 160 per cent., i. e. 260 dollars in paper were needed to buy 100 in gold.

A curious circumstance of the American depreciation was that in California public opinion insisted on retaining the gold standard throughout. Communication with the eastern states was slow and difficult, and California possessed abundant gold from the mines; of course United States law was valid there, and legally paper money was good tender for the payment of debts, but in practice opinion was so strong that no one ventured to insist on his legal rights, and gold remained current. This is striking evidence of the fact that the essence of money lies in its universal acceptability: legal regulations are of much less importance than public opinion.

For a really bad case of depreciated paper the 'assignats', issued by the French Government of the great revolution, have long been quoted in all the books. They were never well received, and in a few years fell so much in value that in the end they were repudiated altogether. They provided the standard illustration of the ridiculous lengths to which depreciation could go, such as paying 1,000 francs for a pound of coffee; but that record has been outdone by recent vagaries of currency in Eastern Europe.

The issue of assignats was defective in two respects. It soon became excessive in amount: the intention was to limit it to a moderate amount, but there being no clearly marked point at which to stop, the Government—in want of money—was tempted to issue a few more, and a few more; then, when depreciation had set in, even larger amounts were needed, so that the total increased like a rolling snowball. This is the usual history of paper issues by impecunious governments. The second defect is equally instructive: the notes were secured, not by a reserve of coin, but by an assignation of State lands. It was supposed, and the mistake has often been made since, that if the issue was backed by real property of sufficient value, the notes could not depreciate. This is a mistake, because the holder of notes wants money to buy things, not vague claims on landed estates.

At first the claim was quite indefinite : subsequently it was made a specific claim to particular pieces of land at specified prices. But a creditor does not want to have troublesome and unnegotiable property assigned to him in payment, he wants something like gold coins which will be accepted without delay or hesitation, anywhere ; and consequently he does not care for paper that only conveys a right to fixed property. The assignation of such property will not keep a note issue from depreciating.

From the innumerable examples of forced paper currency produced by the late war we may choose two, in addition to that of Britain. In France the system of note issue in vogue was continued, but the Bank of France was no longer required to pay in gold or silver, and the amount of its issues rose from 6 milliards of francs to 36 milliards. At the end of the war, however, the increase was stayed, and after a few years a condition of some stability was reached, but with the franc worth only 20 to 30 per cent. of the gold it is supposed to represent.

In Germany the same plan was followed, but the deplorable condition of the public finances after the war led to continued demands on the Imperial Bank for more and more notes as the only way of meeting urgent expenditure. The 'snowball' effect went to such lengths, before a new kind of money was introduced, that 1,000,000,000,000 paper marks exchanged against one mark in gold. To show what this inconceivable figure means, we may suppose that the whole German national debt had been borrowed from a single person ; then, if the creditor had been repaid in these depreciated paper marks, he could have bought a packet of cigarettes with the money, but it would hardly have been enough to pay for a lunch.

There are three ways of restoring the currency after depreciation. The first is the simple plan of repudiating the old money, and starting entirely afresh.

The second plan is that known as *devaluation*. It consists in

accepting the depreciation that has occurred, and adopting a new gold unit corresponding to the actual value of the paper money. This has often been done; for instance in Latvia, where, after the war and the declaration of independence of that country, the rouble was greatly depreciated and fluctuating. In 1922 the government decided on a new unit, the 'lat', equal to a gold franc, and fixed the value of the old paper money at 50 roubles to the lat; since then the money has been maintained on the new basis at par with gold. When depreciation has gone even to the extent it has in France, it is practically impossible to do otherwise than accept it, for to restore the old gold standard would mean that every payment in money due would become more than three times as burdensome.

The third plan, *deflation*, is to reverse the foregoing process of inflation due to the excessive issue of paper money. If the Government or the Central Bank buys this back and destroys it, so as to reduce the circulation sufficiently, the comparative scarcity of paper money will raise its value to that of the gold it is intended to represent. It is hardly necessary to say that this redemption of debt requires considerable sacrifices on the part of the country that so aims at restoring its credit. England after the Napoleonic wars, America after the civil war, Sweden and England recently, have carried the process through successfully.

One point of first-rate importance in theory comes out with equal clearness from the history of money; the point that paper money does not owe its value merely to the prospect of conversion into coin. Money is used to carry on business, and anything that will serve that purpose must have value. In many recent cases of inflation the prospect of redemption in gold has been too distant and uncertain to exercise any appreciable influence on people's minds; but to have something to pay bills with is an immediate and urgent need, and if only paper is available, paper will be used. The value retained by the unit of paper money

will depend essentially on how many such units there are in relation to the amount of business to be done. The value will remain considerable when, as in France, the number is not grossly exaggerated; will become trifling when, as in Germany, the output of paper money becomes prodigiously great.

4

Bank Deposit Money

Bank deposits count, in practice, as money. Function of a bank is to lend its credit. It distributes its assets, with this end in view, between cash, bills, advances, &c. Deposits are mostly created by loans, and are a rendering liquid of the property of the bank's shareholders and customers. Credit is thus converted into credit-money: the amount of credit-money is easily adapted to circumstances, and its limits are difficult to define.

Banking organization illustrated by English examples.

We very often pay our expenses, neither with coins, nor with paper money, but by cheque, and it is mostly a matter of indifference to the recipient in which form he is paid. Here, then, is an addition to the monetary resources of the community, and it is curious that while the State has usually been jealously exclusive in supplying coins, and has at least exercised supervision over the manufacture of paper money, the cheque system—now the most important means of payment—is a development of private enterprise, and has been left to itself. It is the most important means, at least in English-speaking countries, for all large payments are made by cheque; at least three-quarters of the total amount of payments are so made.

How much money has a person got? The usual answer would be to count up the coins in his purse, the notes in his pocket-book, and add the amount that stands to his current account

at the bank—the last item probably being much the largest. Whatever differences there may be between gold and money on current deposit (or what the Americans call ' checkable deposits ') there is practically none from the individual's point of view. The person may have much more property, but it is not money: if he contemplates a large expenditure, say to buy a house, he will make suitable arrangements to obtain more, either by selling securities or by a loan from the bank. He may feel that he can overdraw his account, but he would not adopt that resource often, or to a large extent, except by express permission of the bank. Hence, the above definition of the amount of money an individual (firm, or company) has to spend is approximately correct, that is, if we use the term money widely, to cover all means of payment.

Banks serve various purposes; it is their money-creating function that interests us here; but in order to understand it, something must be said about their character in general. A bank is primarily an organization for putting those who have capital to spare into connexion with those who want to borrow. The banker, or bank-shareholders, must have some capital of their own, but they are usually entrusted with a good deal more by their customers, who deposit with the bank money they do not want at the moment. The funds provided in both these ways the bank utilizes by lending to customers. The bank, however, does not act like a solicitor or other agent who puts a borrower into touch with a lender: the bank always acts as principal. That is, when it makes a loan, it lends its own money, and takes full responsibility, and on the other hand it borrows (accepts deposits) from its customers. This is a highly important distinction when it comes to considering how much money the bank can lend.

From the banker's point of view money must be distinguished from credit; coin and legal tender notes provide him with the

means of finally discharging his liabilities when necessary. They, accordingly, are money to him. The word 'money' therefore has two meanings, a narrower and a wider; it is a pity that some other word such as 'currency' should not be reserved for the second meaning, but it is not practicable to depart so far from popular usage; we must stick to 'money' and interpret the word according to the context.

Another peculiar feature is that those who lend to the bank retain, as a rule, a claim to recover their money at a moment's notice. Most deposits are repayable on demand, or 'checkable', which is the same thing: though there is also a system of placing money on fixed, or time deposits, i. e. lending to the bank for a fixed period, such as six months or a year. Bank balance-sheets ought to discriminate between checkable and time deposits, since the liability is quite different, but they often fail to do so.

This feature really governs the policy of banks, since it is necessary for them not only to be solvent, but immediately solvent, i. e. to have command of cash in sufficient quantity to meet, instantly, any demands made on them, whether to cash notes or to repay deposits. The right distribution of his assets is the constant care of the banker. He will keep a certain proportion in cash, whether gold and other coins of his country, or paper money, if that is legal tender: how much is a matter of experience—the English banks have come to regard 11 to 12 per cent. as a reasonable proportion. But cash in hand brings no profit, so the banker will not keep more in that form than he considers necessary to be thoroughly safe. Next he will look about for assets which can be turned into cash quickly, so as to form a second line of defence against demands. What these are depends on the opportunities offered by the centre in which he is doing business.

The most important is the bill of exchange. This document is now mostly used in international trade. As an example, sup-

pose an American merchant sends a consignment of raw cotton to England. He draws a bill for the amount, on the purchaser, directing him to make payment at a specified date, such as sixty days after it is drawn, and in a specified place, such as a London bank. This bill has to be 'accepted' by the purchaser (or some firm acting on his behalf). When such a bill represents a genuine transaction, and is attested by the signatures of reputable parties, banks are very willing to 'discount' it, i. e. to buy the claim to payment it represents, deducting a certain amount of discount for the use of the money during the currency of the bill. The system is convenient to the merchant, as he gets paid for his goods without waiting the two months or more that the buyer requires for payment, and it provides a good investment for the banker, as the money used to discount the bill is repaid at a fixed date not far ahead. By suitably arranging a portfolio of bills the banker makes sure of some cash coming in every day, and if he wants to increase his store of cash, all he has to do is to refrain from discounting fresh bills.

There are other ways of placing the bank's resources, such as Treasury bills,[1] loans to stockbrokers, purchase of good, marketable securities, all of which yield a moderate profit to the banker, and can be turned into cash without difficulty when needed. The bank also lends a large fraction of its funds to its own customers, merchants, manufacturers, farmers, and others, who need money for business. Such advances usually bring a higher rate of interest, but they are not so readily recoverable; true they are made for some such period as six months, but the bank is often, in practice, compelled to renew the advance when it falls due, for if it were too stringent in requiring payment, it might make its customer bankrupt. It does not do, therefore, for a bank to have too much of its resources tied up in advances of that

[1] Similar to commercial bills of exchange, but issued by the Treasury to meet temporary needs.

kind. Finally, some of its assets consist of the land and buildings it uses for its own affairs, and these are evidently not recoverable except in the extreme event of giving up business.

By such means the bank is able to carry on its business of lending, whilst providing its depositors with the valuable convenience of being able either to draw out money themselves or to pay it to other persons by means of cheques. But the bank does not usually lend actual money: it may hand the borrower a bundle of notes, as mentioned in the last chapter, but now that the use of cheques is so familiar, the usual way of lending is merely to make an entry in the bank's books, authorizing the customer to draw cheques to a specified amount, just as if he had deposited that much money.

A cheque is an order to the banker to pay a third party: the payment may be in cash, but usually the cheque is itself deposited to the payee's account, so that it amounts, in practice, to an order to transfer some bank deposit to another person. If the drawer and payee deal at the same bank all that is needed is done by making book entries—adding to the one customer's account and reducing the other's.

It is clearly the deposit rather than the cheque that is the important thing, and this leads one to inquire how deposits come into existence.

This may be by the paying-in ('lodgement') of coined money, and to a small extent it is so; but the deposits in modern banks are so great they cannot all have been made in that way: the deposits in banks of the United States alone amount to much more than all the gold and silver in the world.

Lodgement of cheques does not add to the total of deposits, it merely transfers deposits from one account to another, possibly from one bank to another, but does not affect the total.

On the other hand, when a bank makes a loan to a customer, by giving him the right to draw cheques, deposits are increased;

for no one borrows unless he wants to use the money, so that most of the amount of the loan is soon paid away to other persons, who deposit the cheques to their own accounts. Thus *loans make deposits*, according to the usual phrase. When a bank discounts a bill it is making a loan, in a very similar manner—the customer's balance is credited with the amount, and the total of deposits increased. Again, if the bank buys bonds in the open market, it pays for them with its own credit, and deposits are increased, while if the bank sells securities deposits are decreased.

It appears then, that, for the greater part, deposits have come into existence by banks making loans: have been created by the banks themselves. But not created out of nothing. Banks lend on security: rarely on personal credit. The customer hypothecates some title to real wealth—shares in a company, title-deeds to land, and the like. What the bank does, by means of its credit, is to turn some of this wealth into means of payment—into money. The customer provides the real value, the bank provides the liquidity, the acceptability that makes it serve as money. The nature of *credit-money* becomes clear by following out this process.

'Credit' in commerce means the power of inspiring sufficient confidence in others to induce them to provide money or commodities without immediate compensation. A housekeeper possesses credit when she obtains groceries on an understanding that they are to be paid for at the end of the month: a merchant is exercising his credit when he buys goods and gives a three months' bill for them. In some cases the credit is represented by a 'credit instrument', such as a bill of exchange, or a bank note: in others it may be recorded in correspondence: in others it may be a merely oral transaction. The difference is not essential: the important matter, in all cases, is the transfer of the control or use of wealth.

Credit is occasionally transferred from one person to another:

but the credit of an ordinary trader is not well enough known to be acceptable by any person who has not business reasons for taking it instead of cash, so that it is not usual to try and obtain goods by handing on some one else's credit. A bank, however, has a sounder and wider reputation than a trader, so its credit comes to be accepted where that of the trader is not; there is advantage, therefore, in giving bank credit in exchange for other kinds, and an extensive system of such replacement has grown up. The following is a typical example of it. A manufacturer thinks he can increase his income if he can obtain the use of a certain expensive piece of machinery. Not having enough cash to pay for it, he wishes to get it on credit: he might, for instance, persuade the machine-maker to let him have it, on a promise to pay by instalments spread over a year or two. Instead of this the manufacturer persuades a bank that he is a suitable person to obtain the requisite loan. This being written up to the credit of his account the manufacturer draws a cheque with which he pays for the machine: he substitutes the bank's credit for his own, and the machine-maker, receiving it, considers that he has been paid 'cash'.

The machine-maker, in fact, is now in a position to use the value of the machine for his own purposes: the cheque he has received, paid into his account, gives him purchasing power that is universally acceptable, i. e. money. Hence credit has been converted into credit-money: that is the service rendered by the bank.

Credit-money in the form of bank or government notes is created in much the same way, though it may not be seen so easily what is the real wealth that the credit of the central bank or the government converts into means of payment. It may, in fact, be an undefined portion of the general wealth of the country.

It follows, however, from the nature of credit-money, whether

in the form of notes or deposits, that it is very hard to say just how much can be issued without overpassing reasonable bounds. Cheque currency has often been praised for its elasticity, expanding and contracting according to the requirements of trade. True, it has valuable qualities. It can be expanded without difficulty; the banks make a profit by doing so, and will only forgo the advantage if they are very much impressed with the insecurity of the commercial situation. Contraction is not so easy, for just as loans make deposits, so repaying loans to the bank put deposits out of existence; and repaying is not so easy a process as borrowing. Still, deposits are reduced when a depression in trade happens after there has been considerable expansion.

But there is never a sharp line between legitimate and illegitimate advances: banks have to use their judgement as to how far to go. A bank manager is guided by the amount of money entrusted to him by customers who have genuine credit balances, it is true: but he does not actually lend their money to other customers, he lends credit which is based on the general resources of the bank, and it is not possible to define, within a good many per cent., how much credit is justified by the extent of those resources. Hence a prudent and well-managed banking system is one of the most precious possessions of a commercial country.

The organization of banking follows national lines; there is usually a central bank, and the commercial banks of the country form a group in partial dependence on it. The English system is a good example. The old private banker, who was personally acquainted with his own district, and acted as a sort of patron of industry there, has practically disappeared, swallowed up in the growth of gigantic joint stock banks. Of the latter there are five of the first magnitude, each with hundreds of branches, and a few smaller ones. They are not allowed to issue notes, but their deposits amount to four or five times the value of all the paper money in the country, and they are in so strong a financial

position, that the extent of the credit they decide to grant is perhaps the strongest monetary influence in the country.

To give greater definiteness to the facts about a bank's resources and the way they are utilized, a typical balance-sheet is subjoined—a recent return by one of the 'big five' (amounts rounded off to the nearest £100,000).

Liabilities.	£ *Millions.*	*Assets.*	£ *Millions.*
Capital and reserves	21·7	Coin, bank and currency notes, and balance with the Bank of England	54·3
Undivided profits	1·5	Balances with and cheques in course of collection from other banks in the United Kingdom	15·0
Current, deposit, and other accounts	360·3	Money at call and short notice	16·2
		Bills discounted	58·4
		Investments	41·9
		Advances to customers	188·7
		Small items	9·0
TOTAL	383·5	TOTAL	383·5

The statement is deficient in detail. No one doubts the soundness of the great English banks, whose reputation is first rate: but they take advantage of that reputation and neglect to give information which would be in the public interest, and which in America the banks are required by law to give. The first item of assets is all regarded as cash; it would be better if the components were given separately, and one of them calls for special notice. The English banks keep deposits with the Bank of England, and they regard such deposits, which, of course, are repayable on demand, as cash. They are not, strictly speaking, legal tender, but just as the private person draws no distinction in practice between notes in his pocket and money on current deposit at his bank, so the commercial banks draw none between sovereigns in their till and a claim on their banker—the Bank of England.

The third item is one for which the vast and elaborate organiza-

tion of the London money market offers the opportunity. It consists of loans repayable either on demand or at a few days' notice, by various financial houses, and is regarded as cash at one remove.

Bills discounted probably include treasury bills: no information is given as to the amount of these and of trade bills separately.

Investments mean such bonds and securities as are dealt with on the Stock Exchange—no doubt only those of the highest quality.

On the other side of the account, 'capital' and 'reserves' are the property of the shareholders of the bank, and therefore a liability only in a book-keeping sense. The great item of genuine liabilities is that of deposits due to customers, and here the statement fails to show whether they are repayable on demand or not.

When the drawer and the payee of a cheque do not deal at the same bank, a payment from one bank to another is involved. To effect this conveniently the London 'clearing house' has come into existence: there, every day, the cheques payable between the leading London banks are counted up, and the balances due are settled by cheques on the Bank of England. Thus, the whole system of payment by cheque, involving many thousands of millions sterling a year, is managed without using any coin at all. This clearing system has been copied in all the leading monetary centres.

The central member of the British banking system is the Bank of England. This is divided, in accordance with the Bank Charter Act, into two sections. The 'Issue Department' is merely an office for the mechanical carrying out of the regulations as to note issue referred to in the previous chapter. The 'Banking Department' is a real bank, which deals to some extent with the public, but is mainly occupied (1) in managing the Government's financial business, (2) in acting as banker to the commercial banks.

It receives deposits from the latter, and holds against them the usual banking assets, but including a much larger proportion of cash than a commercial bank thinks it worth while to hold, including the main store of gold in the country (represented by the notes it receives from the Issue Department).

The Bank publishes its balance-sheet weekly, and one feature of it requires special mention. Deposits are divided into 'public' and 'other'. The former entry relates to the deposits of the Treasury and other Government departments: the heading, 'other deposits', includes a number of private accounts, but the largest part consists of the money the commercial banks keep on deposit with the central institution. Now the commercial banks treat 'coin, bank and currency notes, and balances with the Bank of England' as their first line of assets, as cash. Although the 'other deposits' hold no privileged position as legal tender, yet in the eyes of the banks they occupy the same place as legal tender; the banks base their operations on these various funds equally, so that in considering the stock of money in the narrower sense (p. 38) in Britain, the item 'other deposits', ought, in practice, to be included.

The banking systems of different countries show much diversity in detail. For one thing the use of current accounts and cheques is not as widespread on the Continent as in Britain, United States, and the British Dominions. For another, small local banks prevail in some countries (including the United States), while in others amalgamation has gone as far as in England, and there are even countries in which almost a monopoly in banking exists. Nevertheless, there is a similarity in general outline. In most countries, now, there is a central bank which undertakes note issue, holds the main gold reserve, co-ordinates the action of the other banks, and serves as a stand-by for them when in need. The organization of the central bank varies: in England, whose institutions are so often unique and apparently illogical, the Bank is a purely

private company, earning dividends for private shareholders, and yet, in accordance with century-old tradition, it always acts as a national institution, putting the interests of the country first. Australia, with its customary enterprise, has established a state bank, which is a department of the government. Other central banks are intermediate in character.

As industry grows steadily more extensive, more complex, and more closely knit into a world-wide organization, banking, too, tends to transcend national boundaries. Some indication of this is seen in the branches and affiliations that leading banks establish in foreign countries. It is seen also in such a suggestion as that made at the Genoa Conference, that the Bank of England should invite the other Central Banks to a congress, to discuss problems of currency and the control of trade movements. It is true that we are still far from international organization in banking; but private international finance is a strong influence, and its relationship to national governments may well prove, in the future, one of the forces driving the world to an organization beyond and above the present national states. That in turn may lead to a new chapter in the history of money: international money has been talked about, but it can only become real when there is an international authority to issue it.

5

Money as Standard of Value

It is of the essence of money to be the standard of value. Gold varies little in value from year to year, but over long periods it is less constant than staple food stuffs. Wheat might be adopted as standard, but a better plan is to form an index number from many leading commodities. Indices can be prepared to express the general purchasing power of money: and also the cost of working class living.

The history of prices is closely related to that of the precious metals. English prices for the last century show three main features:

(i) *Rise and fall due to abundance or scarcity of gold.*
(ii) *Fluctuation due to the trade cycle.*
(iii) *Exceptional rise due to great wars.*

We must now turn to the aspect of money as standard of value. This is, of course, not a separate function, for money can only be employed as a medium of exchange because it is accepted as a measure of value. The money of account which arises out of all transactions, other than mere barter, is in its nature a measurement; it is expressed in terms of a true unit, that is, a thing with many examples, but no individuality: a pound or a franc is identical with another pound or franc, whereas a bag of wheat is only rather like another bag of wheat, and one field is not even much like another field.

The monetary unit of most countries is defined by law as a certain weight of gold: in a few as a weight of silver. In some countries before the war, and most countries since the war, the legal definition has become inoperative, the money of account being represented by paper notes which are without definition. No country, however, has formally abandoned the metallic standard, and until that is done one must assume that the metallic standard is to be regarded as an ideal to be put into practice when the finances of the country permit.

The discussion, in this chapter, is necessarily historical, and in these circumstances it seems best to deal with the history of the value of gold, and treat prices in a régime of inconvertible paper as a side issue: while proposals for a better definition of the monetary unit, since they have nowhere passed beyond the stage of proposals, may be considered after the leading facts about the gold system have been brought out.

Price means value expressed in terms of the money of account: if that money is effectively based on the gold standard price means value expressed in gold. Hence, in that case the constancy of the price of gold is a truism: e. g. that in England standard gold is worth £3 17*s.* 10½*d.* per ounce, or fine gold £4·2477 per ounce, is a statement of the same character as that twelve inches are equal to one foot—a matter of definition. If, however, the money of account is not on a gold standard, gold is a commodity like another, and its price is quoted every day in the market.

In any case the *value* of gold is not fixed, but depends on the influences of demand and supply, like the value of other things. Changes in the value of gold have not been generally commented on until recently, though they have long been the object of study by economists. (Adam Smith has an excellent chapter on 'the variations in the value of silver during the last four centuries'.) The reason of this is that the fluctuations in value from year to year are small. As remarked above (p. 9), the value of the precious metals is kept from rapid fluctuation by their durability: the production in a year has rarely been as much (in the case of gold) as 5 per cent. of the monetary stock in existence, so that the richness or otherwise of the mines cannot rapidly affect the value of the precious metals as a good or bad harvest affects the value of agricultural produce, or even as the value of the base metals is affected by the accidents of mining and manufacture.

The large annual output in the early years of this century was

beginning to produce enough effect on the value of gold to attract attention from the public for the first time. The extraordinary changes in value since 1914 (due to a different cause) have compelled notice even from those who are only interested in immediate consequences; the public has always implicitly taken money to be invariable in value—has supposed that a pound is a pound, in the sense that a yard is always a yard; but this belief has been shaken by the monetary vagaries of the post-war period.

It is not true that the real efforts and sacrifices needed to acquire an ounce of gold remain approximately constant over long periods of time. The cost of mining depends on the abundance of the known gold ores, and on the progress of the science and art of mining; so it is not to be expected that it should be constant, and actually, in the Middle Ages gold was extremely scarce and valuable, while in the half century that discovered both the Californian and the Witwatersrand gold deposits, the metal became much easier to obtain than at any previous time.

Over a period of centuries then, gold probably does not afford as steady a standard of value as an article of prime necessity, such as wheat. The effort needed to procure a bushel of wheat tends to become greater owing to the growing scarcity of wheat-land to supply the enormously increased population of the world: but it tends to become less owing to the various improvements in the technique of agriculture. So that, although from year to year the value fluctuates considerably, according to the seasons, from century to century it is hardly possible to say whether wheat has become really cheaper or dearer.[1]

Since the value of other things is measured in terms of money, the value of money is measured by the inverse of prices: high prices in general mean that money is of low value, low prices that money is scarce and of high value. If money is on the gold

[1] Adam Smith, *Wealth of Nations*, p. 187 et seq. (Cannan's edition).

standard, the exchange value or purchasing power of gold will be measured by the inverse of prices. Thus, at the beginning of this century wheat sold in England at about 3*s.* 6*d.* a bushel, whereas before the war it had risen to more than 4*s.* These facts might just as well be expressed by saying that at the beginning of the century an ounce of fine gold was worth 24 bushels of wheat, but by 1914 had fallen to about 20 bushels: and, in fact, this way of putting it would bring out the change which had really taken place in the purchasing power of gold. In the same way the fact that in the thirteenth century 9*d.* a bushel was a common price (then reckoned in silver), might be expressed by saying that an ounce of gold was worth more than 100 bushels.

Recently, in Germany, owing to the confusion to which paper money has been reduced, contracts have actually been made for payment according to the prices of rye and coal, thus making these commodities into a standard of value.

Whilst a bushel of wheat would in some respects be a good standard of value, a better one is obtained by averaging the prices of a number of common articles. If the price of a thing rises, that may be due to an increase in the value of the thing in question, or to a decrease in the value of money, or to both causes. But if the prices of fifty different commodities all, or nearly all, rise, that is almost certainly an indication of a monetary change. Occasionally, an event might happen, such as a great war, that made commodities in general scarce and dear, but in ordinary times the influences affecting a large number of commodities would be as likely to go one way as the other, and would cancel out on taking the average, so that a general rise in prices would be attributable to a cheapening of money, and vice versa.

This method, carried out systematically, gives what are called *index numbers* of prices. For this purpose a number of commodities are chosen, and the price of each recorded, say monthly:

a certain date is selected as the starting-point, and all prices expressed as percentages of what they were at that date. Then the average of these percentages at any date is the index number at that date. One of the best known is the index calculated for many years by Mr. A. Sauerbeck, and continued of late by the *Statist* newspaper. It is based on the prices of 45 raw materials and foodstuffs, as sold in the wholesale markets of London or other important English centres. Two quotations of wheat are given, one the officially published average of English wheat, the other the price of a standard quality of American wheat in England, one of flour, one each of barley, maize, potatoes, and rice. Animal food is represented by seven quotations, and there is a third food group consisting of sugar, coffee, and tea. Then comes a group of four metals and coal; a group of textile raw materials, and one of miscellaneous materials used in manufacturing, such as hides, tallow, soda, and timber. The period chosen as base is the 11 years 1867–77. Accordingly, the figure 58 for soda crystals in 1912 means that the price then was only 58 per cent. of the average during 1867–77; and the total, 3,831, obtained by adding the indices for all the commodities, means that the amount of each which cost £100 in 1867–77 (£4,500 worth in all), could be bought in 1912 for £3,831. The index number for that year was then 3,831 divided by 45, that is 85.

Index numbers afford the means of comparing the purchasing power of money at different times, or at different places; and it is generally agreed that the most useful numbers are those which, like Sauerbeck's, are derived from the wholesale prices of raw materials and foodstuffs. This choice of a basis is due, chiefly, to the difficulty of defining other goods. Corn of a specified grade is a definite thing, and in quoting its price from year to year we know what we are comparing; that is not the case with manufactured goods. They are too varied and changeable in quality to serve as a good basis of comparison; a motor car

now is not the same thing as one of twenty years ago, even if it be practicable to specify a standard type of car.

Hence, while an index number of general prices is a most useful concept, we must bear in mind its limitations. Manufactured goods play a more important part than formerly, because the world is growing richer, and is not so much occupied with providing itself with necessary food, and manufactures tend to grow cheaper. The usual index number does not show this; if it shows prices to be rising, the rise should really be rather less, because manufactures do not rise so fast as other goods, while if the index number is falling, the fall should be rather greater than is shown, for manufactures will be falling in price more quickly than raw materials.

But while the wholesale index number is the most widely useful, we may desire information as to the purchasing power of money for some special purpose, such as for ordinary living expenses, especially of the manual working classes. The notion of the 'cost of living' has come into marked prominence lately in wage disputes, for workpeople have thoroughly grasped the fact that what matters to them is not how much money they receive, but what they can buy with it.

Systematic records are now kept, in many countries, of such prices: of food as sold in retail shops, of fuel, house-rents, and prices of the commoner articles of clothing. These estimates involve difficulties of their own, chiefly in the choice of the articles priced, and the relative weight to be attached to them. If the index is applied to a different mode of living it may be considerably out. For instance, if at time (or place) A, beer is cheap, and scientific books expensive, while at time (or place) B, beer is more expensive, but scientific books cheap, opinions will differ as to whether the cost of living is higher at A or B. Even restricting the inquiry to working class expenditure, the comparison may present difficulties, e.g. the great rise in prices during the war

induced many people to readjust their expenditure, looking out for articles of food, especially, which had not risen so much as others.

Accordingly, if the items in a workman's household budget of 1913 subsequently rose to double the cost it is possible that the workman's family might, by readjustment, be just as well provided for at an expense less than double that of 1913. Similarly, an inquiry into the cost of living of English and German artisans showed that if the German tried to buy the same articles as the Englishman it would cost more than in England: and yet that the food and other things actually bought by the German would cost less than the same articles would in England.

Attempts have been made to apply cost of living figures to the whole population of a country by weighting the prices according to the total consumption of the leading commodities: but even in this case it is difficult to allow properly for the very numerous small items that enter into the consumption of the richer classes. Further, the articles quoted are not, in general, so accurately defined as those sold in the wholesale markets. Despite these difficulties it is found that there is not usually much difference between the conclusions based on wholesale and retail prices: when prices are changing rapidly the change shows itself earlier and more markedly in the wholesale markets, but if the changes are slow, the wholesale index, giving the value of money in general, is also fairly applicable to the cost of living of the working classes.

Historical records give the means of reckoning the value of money in accordance with the conception usually adopted, that is, its purchasing power in goods; and for many decades now, such calculations have been made. But if we attempt to go back prior to the nineteenth century, we find only fragmentary data, relating chiefly to food. However, this is the less unsatisfactory, because in earlier and poorer times the proportion of income

that had to be spent on food was greater than now; the weight to be attached to corn and meat for such times is great, and records of corn and meat prices mean more than they do at the present day.

A celebrated edict of Diocletian (A. D. 301), fixing maximum prices of ordinary commodities, gives some insight into the position in the times of the Roman Empire. The fact that the government made an attempt to fix prices shows, of course, that they had been rising above what was then considered a reasonable level, so the value of money before the date of the edict may be put rather lower than is indicated by the prices quoted in the edict itself. Some of the prices, converted into present English units, are as follows:[1]

Rye . . .	27½ pence per bushel[2]
Beef . . .	2½ pence per pound
Butter . . .	5 pence per pound

These correspond to about 30 on the scale of Sauerbeck's index. Wages of farm workers and mechanics, at the same date, were from four to ten pence a day, in addition to food.

In England, at the end of the thirteenth century—a prosperous period—wheat was about 9*d.* a bushel, which is only one-ninth of the price at the date chosen by Sauerbeck as the base period of his index (1867–77). A sheep cost about 16*d.*, or approximately the same fraction of its cost in modern times. These prices would yield an index figure of about 10.

Accordingly, money was worth some three times as much then as in Diocletian's time. This was because the long-disturbed

[1] Palgrave, *Dictionary of Political Economy*, iii. 190.

[2] In these comparisons, allowance has been made for changes in the weight of coins; and the transition from the old silver to the modern gold standard is effected at the ratio, so long current, of 15½ to 1 (the ratio used in bimetallic France of the nineteenth century). A penny, therefore, means $7{\cdot}32 \times 15\frac{1}{2} \div 240 = 0{\cdot}473$ grammes of fine silver.

period of the Middle Ages had left the world very depleted of gold and silver: the precious metals, indeed, were more valuable at the end of the Middle Ages than at any time in history.

The great gold and silver discoveries in the New World brought about their full effect on prices by the end of the sixteenth century. Money was so much more abundant then than a hundred years earlier, that wheat had risen to 4*s.* 6*d.* a bushel; a sheep cost nearly 14*s.*—nine or ten times as much. This is the greatest recorded change in price level: indeed by the end of the sixteenth century prices were on a modern level. The price just mentioned for wheat was actually higher than at the close of the nineteenth century, when quotations as low as 3*s.* a bushel were registered in England. Rogers gives 132*s.* as the price of an ox about A. D. 1600. This is less than an ox costs in England nowadays, but English cattle of the present day are very different creatures from those of three hundred years ago. The latter were probably more like the South African trek beast, for which 132*s.* is a rather low, but not unusual price even now.

From 1600 onwards the changes in price level have not been revolutionary; we may, therefore, proceed to the history of the nineteenth century, when fairly exact statistics are, for the first time, available, and the influence of different causes can be traced with some certainty.

The excessive prices caused by the Napoleonic wars subsided steadily on the whole, though with some irregularities due to the state of trade, until 1848. This was a time of steady expansion in industry (it saw the introduction of railways), and the supply of the precious metals, dependent on old and partly exhausted mines, was not adequate to meet the growth of the world's trade.

The situation was changed by the vast new supplies of gold from California and Australia that began to arrive in 1848. At that time more silver than gold was in use as money, and a con-

siderable portion of Europe adhered to the bimetallic system, with ratio 15½ to 1. So the new supplies were readily absorbed, and added to the joint stock of the two precious metals. One effect was to cheapen gold relatively to silver just enough to drive silver, largely, out of circulation in the Latin Union. The effect on prices was to stop the fall that had been proceeding for thirty years, and cause a rise. The decennial average of Sauerbeck's index reached a minimum at 82 in 1848, and rose steadily to 100 in 1859, by which time the new supplies of gold had produced their full effect.

Prices remained, with the usual trade fluctuations, at a high level for about fifteen years, and then began to decline. The primary cause of this was that the output of the gold mines, no longer so abundant, did not suffice to meet the constant growth of the commercial world. But it so happened that about the same time Germany decided to adopt the gold standard, a policy which was followed by several smaller nations. The resulting fall in silver compelled France to abandon bimetallism, and the whole burden of currency was thrown upon gold at a time when supplies were beginning to fall off. This led to an almost continuous fall in prices for over twenty years. Bimetallism was much advocated at the time, and it is quite probable that if that policy had been adopted throughout the world, the great fall in prices would have been reduced or avoided. Britain, however, was resolute in favour of the simple and satisfactory gold currency, by aid of which she had built up prosperity, and the proposals fell through.

The fall in prices was eventually stopped and reversed by the gold discoveries on the Witwatersrand (1887), and minor new fields in Western Australia and the Klondyke. Again it took a few years before the changed position was established, but by the last years of the century an upward trend of prices set in that lasted till the beginning of the Great War.

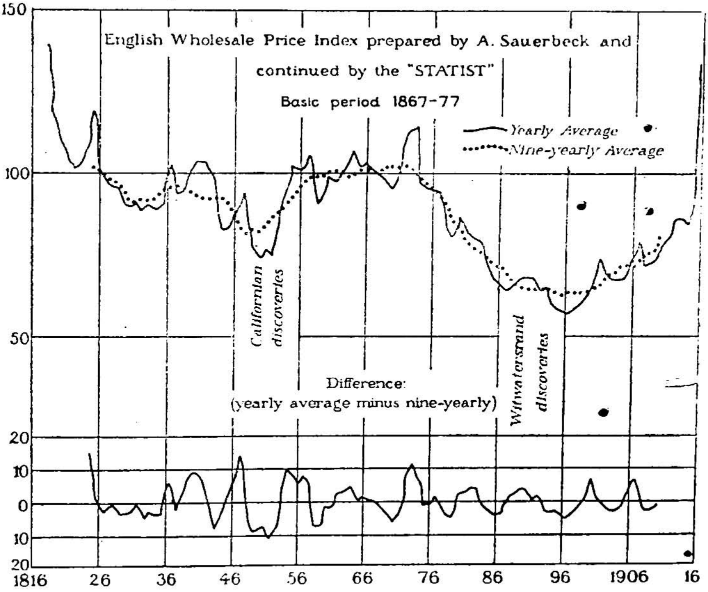
There is thus an accordance between the history of prices and the history of the precious metals. It is possible, however, to trace the relation much more closely. This can best be done after the theoretical basis of the relation has been made clear, but a preliminary explanation may be given now, and a possible source of misunderstanding removed.

The level of prices is not directly dependent on the output of new gold. The value of gold, like the value of everything else, depends on the interaction of supply and demand, but supply, in this case, does not mean annual output. Monetary use of gold does not use the metal up (except that in hundreds of years the coins would get worn away), and it makes no difference to the user whether a coin is made of newly mined gold or not. Hence, any relation that can be traced between the value of gold and the supply must be with the total monetary stock in existence. A diagram of changes in price-level is not at all like a diagram of output, and it is not to be expected that it should be. If diagrams of price-level and of gold stock be put side by side, a relation between the two can be traced, but here, again, it is not a mere similarity that is to be looked for, because the world's demand for gold does not remain constant; it tends to increase with the growth of population and wealth.

The history of the last century is shown in detail in the accompanying diagram of Sauerbeck's index. The index is worked out for each year, and these annual figures are represented by the thin line on the diagram; but, in order to bring out the slower and longer acting influences, an average of each nine years is taken, and set against the mean year, e. g. the average 69 for 1901 is the mean of the annual figures for that year and the four years before and after 1901. These novennial averages are shown by the dotted line.

Three different kinds of change in the value of English money can be distinguished by an analysis of the figures:

(*a*) Changes correlated with the supply of gold. These are slow, and it happens that in the course of a century there have been two oscillations, a fall in price interrupted by the gold discoveries of the middle century, and another fall interrupted by the discoveries at the end of the century. This, of course, must



not be taken as evidence that there is any regular periodicity of fifty years. The future is quite uncertain, depending on the accident of gold discoveries, as well as other unforeseeable circumstances.

(*b*) Fluctuations of good and bad trade, with associated rise and fall of prices. These are a very well-marked feature of recent times, and seem to show a definite periodicity of eight to ten years. Rising prices go with good trade, falling with bad: the

phenomena have recurred so often as to be recognized as constituting a 'trade cycle'. The tabulation of nine-year averages of price is with the aim of eliminating this, and leaving the expression of (*a*).

(*c*) Exceptional effects brought about by a great war. War always causes a rise in price that is not exclusively due to monetary changes. Scarcity of goods would have that effect, even if there were no inflation of currency. Actually, however, in any big war there is inflation, leading to a régime of inconvertible paper, and most of the rise in price-level is due to this; (*c*) is really based upon two causes, therefore, though it is difficult to discriminate between their effects.

During the Napoleonic wars prices rose to nearly double what they had been previously. Convertibility of English paper money (Bank of England notes) was suspended, it is true; but at the time of highest prices, 1809–10, paper was still worth more than 85 per cent. of its par value. The rise in price does not seem, therefore, to have been mainly due to monetary causes, but rather to actual scarcity of production; this was clearly the case with wheat, which rose to a famine price on account of the difficulty of feeding the increasing population when foreign trade was nearly stopped by the war on the Continent of Europe.

In the recent Great War shortage of commodities played a smaller part. The greater command over credit facilities, which has been developed during the past century, offers greater opportunity for abuse; and we have seen that even in England, where the inflation of paper money was more moderate than among most of the belligerents, paper money depreciated to a larger extent than during the Napoleonic wars, and the rise in price was greater. English prices can be corrected approximately to terms of gold by means of the New York exchange. During the actual war period the correction is not quite satisfactory because the gold market, even in U.S.A., was not really free, and because

the exchange on London was only maintained at the rate quoted by unlimited borrowing in America, and so had a very artificial character. After the war exchange operations became a more trustworthy indicator of value.

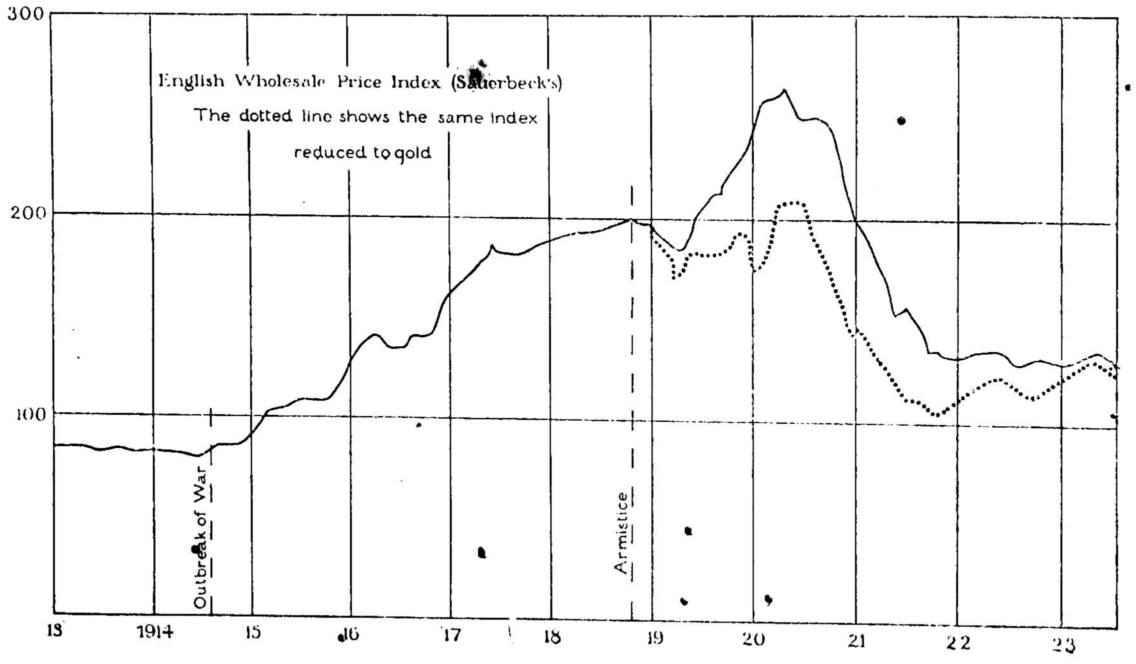
Sauerbeck's index corrected in this way rose from 85 in the years immediately before the war to 188 in 1920. This is a measure of the fall in the value of gold. The Federal Reserve Board publishes an index figure, according to which American prices rose from 100 to 239 (average of 1920), giving nearly the same measure of depreciation. Gold, and all money that was kept at par with gold, was therefore worth in 1920 hardly more than 45 per cent. as much as 1913; at the peak of prices in May 1920 even a little less than 40 per cent. In 1922 when prices had become approximately steady, after an extremely violent drop, the Reserve Board index gives the value of gold as 64 per cent. of its pre-war amount. Sauerbeck's index, corrected for depreciation of paper money gives 71 per cent. The agreement in this instance is not very close, possibly because in the meantime a new, more highly protective, tariff had been adopted by the United States. In any case a substantial recovery in the value of gold is shown, and as policy, at least in America, is directed to keeping the level of prices steady, that level, round about 130 on Sauerbeck's scale, must be treated as the standard of the present day.

Returning to the history of peace times, we may first note the course of the 'smoothed' curve. This, being an average of nine years, will show hardly any trace of fluctuations of period shorter than that. It is seen that from 1821 the course was downwards, not steeply, nor without a slight fluctuation, till 1848. Then a quick rise occurs, leading to a period (*c.* 1858–74) of remarkably steady average price-level. It was during this time that Jevons published his celebrated essay, 'A serious fall in the value of gold ascertained and its social effects set forth' (1863), reprinted

in 'Investigations in Currency and Finance', in which he traced the consequences of the recent gold discoveries; this publication, perhaps for the first time, compelled the general attention of economic and financial students to the dependence of prices on the supply of the precious metals.

Next, there was a fall in prices, of remarkable extent and rapidity, from 1874 to 1895. The average rate of change, as measured by the novennial index, was 2 per cent. per annum. The movement was stopped by the time new supplies of gold were coming in abundantly from the Witwatersrand, and was replaced by a rise, at first slow, and then somewhat more rapid (though not so rapid as the previous fall), which had lasted nearly twenty years, when it was abruptly broken into by the war changes.

The graph of annual price indices shows a succession of peaks, rising above the line of averages, with intervening depressions. To bring out more clearly the nature of this departure from the average we may calculate the 'difference', i.e. between the annual and novennial index for each year, and plot a graph of the results. This shows well-marked maxima at the years 1840, 1847, 1854, 1864, 1873, 1882, 1891, 1900, 1907. These may be regarded as indicating cycles of good and bad trade; eight cycles in 67 years, or an average length of $8\frac{3}{8}$ years. The regularity is not sufficiently great to allow of forecast in detail: the period may be as short as seven or as long as ten years. The maximum may be sharply marked, and followed by a sudden drop (1846), or it may be spread out and uncertain (1853–7); there may be a slight recovery in prices that is not sustained (1877), or there may be an unbroken fall and rise (1883–91). The most important general conclusion that can be drawn, apart from the fact of periodicity, is that the extent of the fluctuations was becoming less. In the middle of the nineteenth century, fluctuations as great as 24 points between maximum and minimum are recorded; by the end of the nineteenth and beginning of the twentieth


English Wholesale Price Index (Sauerbeck's)
The dotted line shows the same index
reduced to gold
300
200
100
Outbreak of War
Armistice
1914
15
16
17
18
19
20
21
22
23

century 12 points is about the greatest extent. Thus, it appears that the causes of trade fluctuation, whatever they are, had been got under control to some extent.

The war changes are usually regarded as being, in part, an exaggeration of the usual trade cycle. The general over-issue of paper money has given a new level to prices, but fluctuations about that level are due to the state of trade, and are more marked than before. It is too early to see the course of events in a clear light, but the change from the boom of 1920 to the slump of 1922 is indicated by a change from 251 to 132 in paper money, or 188 to 120 in gold. Even after allowing for the fact that the average about which the fluctuation occurs is larger now than before the war, this fluctuation is far wider than even the widest in the middle nineteenth century. The war then reintroduced causes of exaggerated price fluctuation, from which economic life is slowly recovering. It remains to see how long it will take to overcome this set back; it is, however, a good sign that the world is now far more alive to the problem than ever before.

6

Social Consequences of Price Change

Changes in price-level affect creditors and debtors oppositely: position of annuitants, capitalists, producers of conventionally priced goods, salary- and wage-earners, business men.

Influence of national debts.

Change in price-level important in case of long date loans: especially those incurred during war, when prices are always high. As a state can influence the level of prices, it has to decide how onerous to make its own debts.

If all prices rose (or fell) together, it would make no difference to any one: it would be just as if, at a game of cards, it were decided to use twice as many counters as before. In real life,

however, prices do not all move together ; when there is a change in the price-level, some prices change more than others, so that relative values are affected : some persons gain in wealth while others lose. Moreover, this change is quite without reason. The actual distribution of wealth may not strike us as very reasonable, but at least it follows some sort of system we have got used to. A change in price-level disturbs the distribution without even that degree of reasonableness, and is consequently a source of profound dissatisfaction.

When money becomes less valuable, i. e. when average prices rise, that works to the disadvantage of all who have money or claims to money, and to the advantage of those who owe money ; a fall in average prices has, of course, the contrary effect. We may thus divide society into the creditor and debtor classes, using the words in rather a wide sense. With creditors we must associate salary- and wage-earners, for their expectations of money payments are relatively fixed : with debtors we must class employers, not only for the money they owe, but also for their practical obligation of continued wage-payment.

On the creditor side, then, we find the following classes :

(*a*) Pensioners, annuitants, lessors and mortgagees of land, bondholders. All these persons have incomes fixed in money, either permanently or for a considerable time. The lessor of real estate will come into the full value of it, regardless of monetary changes, when the lease expires, but that is often so far ahead, that he feels his interest in the lease to be almost permanent. The mortgagee or bondholder, when repaid, may look for a better investment, but otherwise is at the mercy of changes in the value of money ; while holders of pensions and fixed payments for life or in perpetuity have no escape at all from such monetary accidents ; many of them committed suicide in the course of the extreme depreciation in Germany and other European countries after the war.

(*b*) Producers of commodities that sell at prices fixed by law or convention. Penny stamps, penny newspapers, guinea medical consultations, are examples of such fixed prices : when the value of money suffers a moderate change, these prices do not follow it. Still, when the change is great, as it was during and after the recent war, even the most conventional of prices gives way ; we have come to pay three-halfpence or twopence for a letter, and the medical and legal professions modified their fees. The most important example of fixed prices is that of railways ; railway rates and fares are either fixed by a government department (when the railway belongs to the state) or under the supervision of a government commission (in the case of privately owned lines). In either case alteration is difficult, and lags long after it has become due on the ground of change in other prices. Some railway companies were almost ruinously affected during the rapid rise in prices, while, on the other hand, a fall may bring much wealth before pressure of public opinion compels a reduction in rates.

(*c*) A salaried man has, strictly, no claim beyond the date at which his employer can give him notice ; but, in practice he looks forward to years of steady employment. When the cost of living rises, he finds it difficult to secure a proportional increase in salary, and when cost falls, he resists, with considerable success, a reduction. Hence his interests are, decidedly, with the creditor classes.

(*d*) Wages nowadays are adjusted to prices more closely than salaries, and much more closely than in former times. Trade Unions make use of price indices in bargaining for a rise, and they cannot quite disregard the same indications when employers insist on a fall in wages. Still there is always some delay in adjustment, so that the interest of wage earners, too, is on the same side as that of the creditor classes, although in less degree. They are affected, not so much by high and low prices, as by rising

and falling prices. Wages and salaries can, in time, be adjusted to any change in price-level. The enormous rise in the sixteenth century inflicted terrible hardship on workpeople who, of course, were not in so good a position to protect their own interests as now; but eventually the balance between wages and the cost of food and clothing was restored.

Wage and salary earners, then, are not so deeply concerned with the level of prices as those who have debts or credits of a strict legal character. Capitalists and investors sell the product of past labour, crystallized into the form of money; the wealth of salaried and wage-earning people lies chiefly in their future, and the future is plastic.

On the debtor side a complementary list can be made. There are those who have incurred a legal liability for money payments spread over periods which may run into many years: and there are the employers, who, though able to adjust their payments to some extent according to the value of money, yet have to face a serious resistance to reduction of the wage bill when money becomes more valuable, but in the opposite event are able to take advantage of a rise in prices, for some time after it occurs. These classes find their interest in a low level of value for money, and again, their interest as debtors is more permanent than their interest as employers.

It is to be noted that in modern society the debtor class consists almost exclusively of business men, and so includes the richest members of the community. Not that they are all rich, of course. Thus, among those who stand to gain when money becomes less valuable, through their fixed charges becoming less burdensome, are farmers who hold their ground on lease at a fixed rental or own the land subject to a mortgage: lessees of houses, some of whom of late have become rich owing to the greatly enhanced price of house accommodation—they sublet and underlet their properties at rents out of all proportion to the

rent they themselves pay: traders and manufacturers, who are normally in debt to the banks: and shareholders in companies, whose liabilities for debenture interest absorb so much smaller a part of the profits that the dividend paid on the ordinary shares can be largely increased.

It is the vast tissue of debits and credits—an essential part of modern economic life—that gives importance to the level of value attaching to money. The indebtedness is mostly of short date, but quite a considerable fraction of it extends over years, and as change in price-level affects it in such a complex manner, there can hardly be a doubt that constancy in value is the ideal to be aimed at in money, and would make for the general welfare.

Amongst the total of credit transactions, national debts have come to take such a large place, in recent times, that they need special discussion.

Public debts may be classified as internal and external; the former being debts of the state to its own citizens, the latter debts due to citizens or governments of other countries. In the richer countries much the greater part of the debts is internal. To take the case of Britain as illustration, the internal debt, as left by the Great War, is nearly £7,000 millions; this amount is owed by all the people of Great Britain to some of their number. It amounts to an average of £700 per family, or at 5 per cent., say £35 a year. That is the average amount that a family pays, in taxation, to cover interest on the debt; though, of course, the actual amount of taxes varies greatly according to the wealth of the family. The money is paid in interest on bonds which are held by some of the families; in some cases the interest received is greater than the tax paid, in some it is less, in some the two about balance, and the existence of the debt is of little real consequence. No doubt, broadly speaking, the richer classes hold enough of the bonds to receive more than they pay, though

a man may be rich and not hold any government bonds at all; and vice versa with the poorer classes.

Hence, in this matter of the national debt, the interest of the majority is in the value of money being low. In countries where the currency has been greatly depreciated, bondholders have lost their investment, and taxpayers have gained the advantage of what is practically an act of bankruptcy.

External debts are usually contracted in the money of the lender, so that depreciation of the borrower's currency makes no difference to them; in any case they are a real burden that the taxpayer has to shoulder. Sometimes they have been incurred for business purposes—construction of railways and the like; then the profits of these public works should provide the means of paying the interest. This is the case with many undeveloped countries such as Canada, Australia, Japan, and Brazil. But often they are the consequence of government extravagance, especially of war, and then sometimes they are not paid at all.

The larger changes in the value of money that have occurred in the past have been due to the relative abundance or scarcity of gold, and have therefore come about slowly according as the discovery of a highly productive mine-field gradually increases the world's store of the precious metal, or as the natural exhaustion of the mines leaves the supply inadequate to meet the constantly increasing needs of commerce. The slowness of these changes has caused them to be generally overlooked, so that no attempt has been made to allow for them in contracts, or indeed even suggested except by a few economic theorists, whose ideas have been too far in advance of their time to produce any immediate effect. The changes were none the less operative, of course: so that a government which borrowed ten millions sterling to construct a railway, let us say early in 1894, on twenty-year bonds, coming to repay the loan early in 1914, would fulfil its obligation with the same amount of money, whose purchasing power in

railways or other things was, however, only about four-fifths of what it had been. In other words the lenders, at whose expense the railway was made, would only get four-fifths of its value back. Conversely, if the loan had been made in 1873, to be repaid in 1893, money increased in value so much during that interval, that the government, to fulfil its contract, would have had to restore 50 per cent. more value than it received. These changes might have been compensated if the lender of 1873 had had to accept a very low rate of interest, while the lender of 1894 had been rewarded with a very high rate. This compensation did not happen, because the changes were unforeseen.

There is one instance, however, in which no very subtle economic analysis is needed to foretell a change in the value of money. During a great war prices always rise so much that a subsequent fall is pretty certain. Governments borrowing at such times—and the great bulk of the national debts have been incurred in war time—not only have to pay a high rate of interest, but are sure to get poor value for the money they borrow. The former disadvantage is corrected after a number of years, when the government's credit has improved again (e. g. France borrowed at 5 per cent. during the war of 1870–1, but when the loans expired they were continued at 3 per cent.), but the effect due to the low value of money during war time remains, whether the loan is repaid or the interest is paid indefinitely, so long as the purchasing power of money remains higher than it did during the war.

This, of course, involves a very heavy burden on taxpayers, and gives some colour to the claim that the value of money should be kept low, in their interest. If that value adjusted itself through influences over which there is no control, there would be nothing to say. But governments exercise so much influence, partly through their large income and expenditure, partly through laws regulating paper currency and banking, that the price-level is

not automatic. The influence of governments has become greater than ever before ; in countries using inconvertible paper money it is quite predominant, and even when the gold standard is in use, the policy of a large group of States may affect value seriously.

A nation may, therefore, be faced with the delicate problem of regulating its own action on the standard of value in such a way as not to do injustice to its own creditors. Sanctity of contract is precious, but the contract in this case is so indefinite as to give rise to possible varieties of interpretation, and in any case there are limits to what the active population of a country will pay to those whose claims rest on past services. For instance, France can afford to pay interest on the national debt with the franc at its present value, though the burden is severe : to restore the franc to its pre-war level, and pay more than three times as much real value to the holders of the national debt, would be impossible.

7

Good and Bad Trade

High and low prices show a marked periodic movement of about nine years' duration. Other economic phenomena share in the movement, which is known as the trade cycle. Its phases—recovery, speculation, crisis, depression—are described.

The cycle has various harmful features, and should be kept under, if possible. It shows striking lack of stability : this is due to the credit organization : through that organization it may be possible to control the fluctuation. Banking rules as to proportion of cash are insufficient : if the banking organization is strong, the discount policy may be used with effect during the rising phase : but there are limits to the range of such control.

In discussing the history of prices it was noticed that a marked periodic movement appears in recent records. Apart from the slower changes produced by abundance or scarcity of the precious

metals, there is such a regular succession of high and low prices as to have made the notion of a 'trade cycle' familiar. The price-level is only one feature of it; indeed, the whole economic life in western, highly industrial countries, seems to swing through an alternation of good and bad trade, so nearly regular that one distinguished writer, Jevons, attributed it to a periodic cause outside human control—the influence of the sun on the crops. Closer examination shows that, though an average of eight or nine years has been well marked in the English records of the last century, the period shows a tendency to shorten, and that human influences are much more to the point than the doubtful effect of the weather.

Price records are the most exact available statistics, and those available for the longest time, and the variation in price-level is a valuable indicator of the state of trade: but the fundamental character of good or bad trade is not to be found in price. The course of the cycle shows first a feeling of revival, and gathering optimism, usually pressed too far, till it becomes a speculative 'boom': this leads to a crisis and collapse, followed by a lengthy phase of depression, from which revival comes again. Prices rise during the phase of optimism and fall in the depression: but to understand the phenomenon, other conditions must be described. Monetary affairs play a large part, but the trade cycle is neither exclusively monetary, nor due exclusively to monetary causes.

Starting with the revival in trade we may describe the facts as follows: Manufacturers, whose business has been slack, find that they are getting increased orders from merchants as the latter have come to the conclusion that prices are not likely to be any lower in the future. The preceding depression has caused a good deal of unemployment, and wages are at a low level; in the same way, as business has been so inactive, the demands for floating capital are low, and the banks are not able to charge

more than a low rate of interest to merchants and manufacturers desiring credit. Thus, the (money) cost of producing goods is low, both labour and capital being cheap; the first effect of increased demand is the perfectly healthy one of bringing the output of goods up to a normal level without noticeably raising prices. There is probably no better test of the state of the economic organism than the statistics of employment. Among trade unionists in Britain it is found that in good times 97 or 98 per cent. are at work. This may be regarded as the limit in ordinary times, as ill health, holiday making, change of place or of occupation, will always account for a few.

So long, then, as the revival of trade only brings the percentage at work up to this figure, the movement is a desirable one. It does not stop there, however; optimism is infectious, for one thing, and many business men take to making plans of extension for the future. If manufacturing were entirely devoted to things that are immediately consumed, such as food and clothes, the demand could not go much too far, but a large part of manufacturing effort is occupied with constructional work. It is plain that the demand for new buildings, machinery, ships, and railways must be far more influenced by the state of mind of the business world than the demand for food and clothing. A wave of optimism may bring such a demand on manufacturers, who are already busy, as to force them to put up prices. They will try and fulfil profitable contracts, and press production, even by working overtime, which is an expensive and harmful way of doing it. Moreover, the demands on bankers are increased, and they raise their charges for interest.

The effect of all this is to raise prices: and the fact that prices are rising is, in itself, enough to make many people buy as a speculation, in the hope that prices will rise higher. The movement may go far—so long as the banks are ready to lend money for speculative purposes there is little to stop it: few business men

are cautious and far-sighted enough to realize the unhealthiness of the position. But the end is apt to come suddenly: any shock to confidence will not only make speculators unload stocks, but will make sound business firms anxious to reduce their commitments, and get hold of more cash to keep against emergencies. If banks discover that they have lent rather too freely, and refuse further credits, that will be enough to put an end to the boom, and create a crisis, which may be anything from a time of mild anxiety to a panic.

The intensity of the crisis will depend on how much too far the previous expansion has gone, and on the way the banks meet the situation. The most essential feature of the crisis is that every one wants more money in hand, because he does not feel sure of being paid the sums falling due to him from other businesses. There is then a sudden increase in the value of money, or in other words a fall in prices: both goods and securities are pressed on the market, and of course fall in price.

The action of banks is particularly important at this phase. If they show signs of panic themselves, and call in loans, they make the matter worse, and widespread bankruptcy will ensue. There is danger of this happening if the banks are financially weak, and not well organized. On the other hand, if the banks are sound and wisely managed, and especially if they have a strong central bank to fall back upon, they will lend freely to businesses whose real character justifies support, and so will tide the country over the crisis. The Bank of England has long since learnt that in a crisis the right policy is to charge high rates for loans, but to lend all that is needed by solvent customers.

The crisis leaves industry in a depressed state. Demand is reduced; even in the case of necessaries, where public consumption cannot vary much, merchants are inclined to order less than usual, because they think they will be able to replenish their stocks more cheaply after a while. Industries which depend on

new construction suffer more, of course, as there is little enterprise, the general feeling being that it is better to pay off debts and strengthen the financial position than to embark on new work. Consequently, the output of goods is seriously reduced, and many workpeople are thrown out of employment. During the months following a crisis, or even for two or three years, the returns of the banks show that credit is being repaid, and consequently deposits contracting. The banks, therefore, have soon to reduce the high charges made during the crisis, and rather try to tempt the use of credit by offering it cheap: discount rates fall to a lower level than in any other phase of the cycle.

Wages do not fall so rapidly, or so far. Indeed, the resistance to reduction may be so effective that those in work are better off than before, because their wages will buy more; but many are unemployed. The percentage among British trade unionists employed falls, perhaps, to 92 or even 90 (it was worse than that in the slump after the war). Recovery would, indeed, be quicker if workpeople were more willing to adapt themselves to the change.

Recovery does come, in time, of course. Excessive credit is paid back, shaky businesses liquidated, and the stronger ones find advantageous opportunities for doing necessary constructional work while prices are low. Wages are modified to some extent, and gradually a renewed spirit of enterprise comes to fill up the factories, and restore the phase of expansion with which we started.

The trade cycle and its causes have been very widely discussed of late years. It is one of the most complex of economic phenomena, and it would be quite inappropriate to attempt a full account of its causes here: all that we are concerned with is the way in which it affects and is affected by money, and while no one cause suffices to explain all the facts, it is generally agreed that the nature of our monetary system plays a large part.

The mere fact that trade is sometimes more active and sometimes less, is not a very remarkable one, nor necessarily an evil; but there are several features of the cycle as it is actually developed that are harmful. First, there is unemployment. If production went on quite evenly from year to year, it would, presumably, be possible to find a niche in the economic structure for almost every one, and employment might be as full as it now is in the best years of the cycle. That employment falls considerably below that in other years not merely reduces the output of wealth, but throws the loss on a small part of the population, to whom it may mean destitution and demoralization. Next there is the gambling element in the rising phase of the cycle. There is a thoroughly unhealthy spirit in trade then; many fortunes are made at the expense of the legitimate earnings of other classes of society, and social unrest results. Again the crisis, even if a mild one, is a bad feature, and it may grow into a disaster, which can only be regarded as a set-back to the economic progress that would accord with any reasonable ideal.

It is therefore in the interest of society to keep the oscillations of trade down to a moderate extent so that these evil features do not develop. Now one of the most curious characteristics of the trade cycle is the instability shown in it. To account for any kind of oscillation we have to postulate something naturally periodic in the oscillating thing itself—to take a mechanical analogue, let us say a ship. Next we have to suppose a force disturbing its equilibrium. If, e. g. a moderate explosion disturb the ship, it will rock regularly to and fro, but after a while will settle down to its former upright and steady condition. To get a continuous oscillation repeated disturbance is needed, such as the ship gets in a rough sea.

The economic equilibrium may be pictured as a state in which everything goes on uniformly: all people earn and spend their earnings with perfect uniformity. It is easy to see that this state

may be intruded upon by large disturbances; a bad harvest, a war, a strike, a new invention; and that the economic sea is, in fact, always moderately rough. But there would be no oscillation of the ship unless it possessed stability, i. e. a tendency to recover its position of rest when disturbed from it; and whilst many economic phenomena show stability, the events of the trade cycle are characterized in certain ways by a remarkable lack of it. When prices are rising, instead of this introducing a self-corrective influence it causes speculation which drives prices still higher: and when prices are falling many persons are driven to sell stocks and force the price-level still lower.

Of course, in the end there is a reaction, both from rising and falling prices, otherwise the movement would not be an oscillation, but would be more like that of a ship that turns turtle. But in truth the movement is never like that of a rocking ship, but rather like one of those electric fans that swings round in one direction until it operates a reversing mechanism and then suddenly swings round the other way, till at the end of its arc it is reversed again. The fan will not stay still in the middle: neither will trade settle down to a steady condition—it is always moving to one of the extremes and then getting reversed.

This curious feature is certainly due to the action of the credit organization. The amount that bankers have to lend is not at all well defined; any particular loan may be covered by good security, and thus appear to the manager to be a sound investment, whatever the general policy of the bank may be; and even the directors when considering that policy are hardly able to say whether the general economic situation requires them to restrict credit, especially if there is keen competition between several banks. The only rule that the ordinary commercial banker is used to is that of keeping a certain proportion of cash to liabilities. This is not a good criterion. When there is an upward movement in trade, and more money is being paid out in wages and

dividends, the public tend to keep more money in their pockets, and so draw out cash from the banks. The banks, then, having extended credit somewhat lavishly, and finding their cash leaking away, probably come to the conclusion that it is time to restrict: but the disappearance of cash is one of the latest features of the phase of rising prices—so late that it is not then possible to check credit without giving a bad shock to industry and trade: businesses have already entered into the contracts which need the extended credit to fulfil.

An earlier and better kind of control can be exercised when there is a central bank, in a strong position, and fully alive to the movement of trade, for it is to the central bank that the other banks look to replenish their stores of cash.

The later part of the rising phase of the trade cycle is a genuine case of inflation. In Chapter 4 we had to deal with cases in which a necessitous government produced inflation by over-issuing paper money, thus forcing up prices, and causing the arbitrary transfer of wealth that is so harmful—the false stimulus to business, and the depression of those classes whose cost of living rises without due compensation in money. In the trade cycle we have an increase in the circulating medium, produced not by government but by the banks: if it exceeds what is really needed by increased production the effect is the same—rising prices, speculation, disturbance of the partition of wealth between classes. How far it goes depends partly on the foresight of the banks, partly on the monetary system in use. The gold standard forms a real check, for it brings home to bankers the difficulty of procuring a satisfactory proportion of cash, especially if the rise in prices drives gold out of the country to places where it will buy more.

If, on the other hand, 'cash' means inconvertible paper made into legal tender the limit to its issue is less certain; even if the issue be well managed the commercial and banking community

is likely to feel that a little pressure will bring out a further supply, so they are not sufficiently concerned to keep the expansion in trade within due bounds. The trade boom that sometimes happens when a paper currency is being inflated outdoes anything that can be produced under the gold standard—but the reaction is correspondingly severe.

After the crisis there is deflation, i. e. the circulating medium, which had been unduly expanded by the creation of bank credit, is contracted and the value of the monetary unit increased. The general feeling is that it is necessary to get hold of a larger stock of money, in proportion to the stock of goods, even at a considerable sacrifice in the value of the goods—for, of course, a demand for money raises its value.

In times of good trade a great many more payments are made than in times of depression. This is not all due to increased production: the increase in production is, in any case, only a few per cent., but the goods produced are handled more frequently, especially when facilities exist for speculative dealings, such as those of the Liverpool Cotton Exchange and the Chicago Wheat Exchange. There are also many more capital transactions, such as sales of securities on the stock exchanges, so that the total amount of money payments increases very considerably: this is shown by the returns of clearing-houses.

The increased volume of payments is provided for in three ways. First, banks by extending the credit they grant actually create more money, using the word in a wide sense. Second, persons who have resources they are unable to employ in business, and which they leave 'on fixed deposit' with banks, transfer to current account instead, so as to be able to draw cheques to a greater extent. Banks which, like the English ones, do not discriminate in their returns between fixed and current deposits, do not show this change: the total of deposits may appear to be the same, but in bad times much of it consists of time loans to the bank,

which are practically investments, not money: whereas in good times there is less of such investment, and more of active means of payment. Third, the sums on current account are used more actively: a greater amount of business is done with the aid of the same bank balance. It is clear that one pound that passed from hand to hand 100 times in a year would do as much monetary work as two pounds that passed 50 times: so, when business is active, bank deposits are transferred more frequently, and this has the same effect as an increase in their amount would have.

The chief means that banks have to influence the trade situation is the rate they charge for loans. Merchants, in particular, are influenced by this: to the manufacturer bank interest is only one out of many expenses, and much less important than wages: but a merchant's chief expense is for the use of capital. Although possessing considerable wealth of his own a merchant normally borrows, on bills of exchange and in other ways, so as to be able to buy large stocks of goods, to sell at a few per cent. profit. One or two per cent. difference in the rate paid by him to a bank may make the difference between a successful and an unsuccessful operation.

When prices are rising it is worth while for a merchant to borrow even if he has to pay a rather high rate of interest, for he makes more than ordinary profits. If, e. g. 3 per cent. is an ordinary rate on the best bills of exchange, and if prices rose at the rate of 3 per cent. per annum, the merchant would practically be getting his bank credit for nothing: the rise in price would pay the discount, and he would be able to make profits as if prices were stationary and discount nil. At such a time, no doubt, competition for loans might drive up the rate somewhat, but not to the level of 6 per cent. that would be needed to restore the position to normality; for no one can foresee the rise in prices with certainty, so the merchant gets considerable advantage from such rise as does occur. Conversely, if prices were falling at the

rate of 3 per cent. per annum, no fall in discounts would be enough to compensate the merchant. Thus, loans are really cheap in times of advancing trade when the nominal rate of discount is high, and really dear in times of falling prices, when the nominal rate is low.

The power of banks to control the situation is therefore limited. During the rise they could check the movement by concerted action in raising the rate of discount; but if the movement has gone far, and prices are rising at all fast, discount would have to be put up to a prohibitive figure, such as 8 or 10 per cent., and this would be likely to cause panic. The check ought to be applied as early as possible, but this can only be done if there is a well-organized banking system, under the leadership of a strong central bank. During the depression the banks can hardly exercise any influence, for no practicable reduction in rate would be a sufficient stimulus to bring about renewed activities in trade when the other circumstances are adverse.

8

International Payments

International trade is treated separately because labour and capital do not compete freely across national frontiers: another reason lies in difference of monetary systems. There can be but slight differences in exchange within a country, within a group of countries using a common standard coin, or even within the whole group using a common metallic standard.

International payments are mostly cleared against each other. The largest group arises out of bills of exchange. Exchange banking, and the practical settlement of exchange rates.

Other payments arise out of 'invisible' exports and imports, and must be allowed for in the balance of accounts. Capital transactions between countries affect the rate of exchange: use of gold reserves.

Purchasing power parity rules between mutually inconvertible currencies. Stabilizing effect of rise and fall in exchange, and import and export of gold. Temporary effects of borrowing and of speculation.

THE theory of international trade was one of the most successful efforts of the classical English school of economists. They fixed attention on the most important characteristics of the trade: treating the nations as units and the trade between them as essentially a barter of goods. This is a wise method of attack on the problem, for it brings out the fact that money is only a convenient mechanism in exchange, the essential features of which are independent of it. But in the present book we have to deal with monetary phenomena, and it is therefore appropriate to follow a different order of treatment, putting international payments first, and making that subject the approach to a brief consideration of the trade which occasions the payments. This may be regarded as a useful supplement to the discussions of the classical writers.

The reason for treating the theory of international trade as a distinct chapter in the general theory of value is that, between nations, there is no effective competition of labour or capital.

Despite the growth of a world-market for capital, it is still true that capital is largely immobile outside the region personally known to the owner; while in the case of labour, difficulties of language and customs are nearly as prohibitive as they were a hundred years ago, when Ricardo wrote. English capitalists content themselves with 6 per cent. on farm loans, although they might perhaps get 12 per cent. by lending on mortgage in China; and Chinese labourers, for still more obvious reasons, stay at home, although they might earn twice as much money in England.

But approaching the question of foreign trade from the monetary side we see another distinction, involving a definition of the term international. Money means something possessing universal acceptability in accordance with custom and law; money is therefore, in the present stage of civilization, national. If one buys goods within one's own country, the means of liquidating the debt are at hand, but if one buys goods from a foreigner, one's own money will not serve to pay for them. A second transaction is necessary to acquire money of the seller's country, i. e. a transaction in foreign exchange.

Even within a country the spontaneous transport of money between different districts does not always suffice to provide means of payment in all parts. A large bank with many branches is then very useful as a means of directing a supply of money where it is needed. Nowadays, in England remittances can be effected through the banks free of cost; the service costs the banks themselves hardly anything, and competition keeps them from making a charge to the public. It was otherwise in the days of localized private banks when gold had to be sent by post-chaise and relays of horses. In the United States distances are far greater, and there is a more marked seasonal flow: money is needed in autumn to 'move the crops' in the west and south, flowing back to New York when that service is completed. Accordingly, the cost to the banks is greater than in England, not only

for the actual transport, but because they have to keep larger reserves, so a charge to the public (exchange on cheques) is reasonable; though lately there has been a successful attempt to do away with such a charge.

Within the Latin Union gold coins of any one country are legal tender in the others. Accordingly, a merchant buying from one of those countries can, if he choose, pay in gold coin: the cost would be that of packing, freight, insurance, and loss of interest during the period of transport. If remittance were made through a bank, the maximum charge that would be paid is limited to that cost of direct remittance in coin, and on large amounts would be merely a fraction of 1 per cent. (This, of course, only in normal times when the gold standard is really in use.) The same situation holds between Great Britain, Ireland, South Africa, Australia, and New Zealand, since those countries use the same standard gold coin.

Between countries that use the gold standard, but not identical coins, the cost of remittance may be somewhat greater, as it would be necessary not only to remit the gold, but to take it to the mint, and have it converted into coins of the creditor's country, unless by chance the debtor were able to buy such coins. The large banks keep a stock of foreign coins, but, of course, they are not bound to dispose of them at any particular price. Since it is possible to remit in gold bullion, and have it coined at the mint, rates of exchange between gold-using countries can only fluctuate between certain limits, known as the 'gold-points'.

For example, one pound sterling is equal to 25·22 francs, according to the defined weights of the sovereign and the twenty franc gold piece. This is called the par of exchange. If it is desired to remit from London to Paris, it would be worth while to accept fewer francs than this in exchange for a pound, but at about 25·12 (varying a little according to cost of insurance and other circumstances) it would be as cheap to send gold. This is

the gold-point of export, and similarly 25·32 the gold-point of import. Exchange is thus limited to a range of about four-fifths of 1 per cent. when the gold standard is in force. In the case of remittance to more distant places the separation between the import and export points is somewhat greater.

But just as cheques are not usually paid in legal tender, but are set off against each other at the clearing-house, so foreign payments are only exceptionally made in gold. There are always quantities of claims to money by each country on the other, and these for the most part balance. A foreign exchange-market is an organization for buying and selling such claims.

Amongst the documents negotiated in connexion with foreign exchange the most important class is the ordinary bill of exchange arising out of a sale of goods. The bill is at the same time an instrument of credit and of exchange. It is drawn at a few months' date in order to allow of a loan of that duration being made by a bank or discount house, for the convenience of the traders concerned, and it constitutes evidence of such loan when discounted. But also, by being drawn in one currency and negotiated in another it is a means of bringing the two into relation. Now the London market is the most highly organized and extensive, both for discounting and for accepting; hence large quantities of bills are drawn on London and in English currency. The method of balancing payments may conveniently be discussed by tracing the history of such a bill.

Bills are drawn by exporters in other countries, and discounted first at banks in the country of origin. A merchant in that country who had imported goods, and had to make a payment in London, would not arrange for a bill to be drawn on him, but would buy a bill on London from one of the exporters in his own country, and by merely posting it to London, would have the means of paying his debt there, so that the same document would actually liquidate both transactions. Since, however, it is not

easy to find a bill of the right amount, and the right date, such dealings are not often made privately between merchants; it is more convenient that a specialist dealer in bills, i. e. an exchange bank, should buy bills from exporters and sell remittance to importers, conducting the business on a large scale, and charging a commission in return for the convenience to merchants.

Accordingly, in practice bills drawn in the country in question would be bought up by the local exchange bank, sent by post to the bank's London correspondent, who would present them for acceptance, and when duly endorsed, would discount them with a London broker or banker. The exchange bank at the same time sells exchange (drafts) on London to the local importers, receiving the local currency from the importers, and being thereby enabled to pay the local exporters for their bills of exchange, whilst the money received in London by rediscounting the bills enables the bank's London agent to honour the drafts arriving from the foreign country.

The actual conversion from one currency to another is thus effected in the foreign country by the local exchange bank: e. g. the price in sterling of the Argentine peso depends primarily on the action of the banks in Buenos Aires, which every day have sterling bills offered them by some of their customers, and every day are asked by others of their customers to provide them with drafts payable in London in sterling. An exchange bank is a merchant in currencies and, like any other merchant, has to keep a stock of the goods he deals in, that is, of money of the two (or more) countries, say Argentina and England. The remittances in the two directions usually nearly balance, but if there is an excess in one direction the effect is to accumulate a stock of money at one end, and to deplete the stock at the other. Thus, if Argentine exports exceed imports, the exchange banks will have to pay out more Argentine money than they receive in Buenos Aires, while in London they will get more English money by

rediscounting bills than they need to meet their drafts. If the tendency persisted, the banks would be driven to counter it by raising the price of the peso, and so encouraging people to remit money from Argentina to England, and discouraging them from remitting money from England to Argentina.

It is at this point that the difference between using a common metallic standard, or not, comes in. If both countries use gold the exchange bank can, itself, set the balance right by sending gold from one to the other, but if the bank has, say, an excessive balance in London, payable only in currency notes, these cannot be sent for use in Argentina. The only thing possible is to raise the price of the peso until the balance of remittances is restored, by means of the inducement this offers to all who have commercial dealings between the two countries. When the gold standard prevails in both countries the rate of exchange will fluctuate constantly, but only within the limits of the gold points; when the two currencies are mutually inconvertible, there is no limit to the possible fluctuation.

The bank's profit on this class of business appears as the difference between buying and selling rates quoted by it. The middle rate between the two represents the relative value of the two national moneys: this is beyond the power of a bank to control. It depends on the general economic situation, and even a monopolistic combination of banks could only influence it temporarily and to a small extent, but the gap between buying and selling rates depends on what the exchange dealers are willing to accept for their services, and may be widened considerably when there is monopoly. It is naturally greater in the case of exchanges where there is little business doing than between large centres, such as London and New York, or London and Paris.

Actual quotations may be seen in the daily papers. There are some confusing technicalities, such as whether the quotation gives the number of local units to the pound, or the number of pence

to the local unit. For details reference must be made to a book on foreign exchange, such as that of Clare;[1] fortunately, there has been some tendency to simplification and logical statement of late. The following examples may suffice here:

22 *December* 1913.

Paris (cheques), 25·31½ to 25·32½ francs to the £.
Copenhagen (three months), 18·22½ to 18·25½ krone to the £.

31 *December* 1924.

Paris (cheques), 87·15 to 87·20 francs to the £.
Copenhagen (three months), 26·79 to 26·85 krone to the £.
New York (tel. transf.), 4·73¼ to 4·73½ dollars to the £.

Ordinary trade bills form the largest group of documents negotiated in foreign exchange, but by no means all; the transactions they represent—import and export of merchandise—are not the only transactions giving rise to claims by one country on another. We must, therefore, consider the various items that make up the balance of accounts.

The difference between imports and exports of merchandise as shown by customs returns is known as the 'balance of trade', and that balance is traditionally known as favourable to a country whose exports exceed its imports. It is, however, impossible to understand the true meaning of a favourable or unfavourable trade balance without considering the other items of account.

The value of exports is usually recorded 'F.O.B.', that is at the moment the merchandise has been delivered free on board the ship; imports are valued 'C.I.F.' (cost, insurance, freight), or in other words, as they arrive at the importing country. If, however, a country possesses ships of its own, its frontier is practically pushed out to the other side of the sea. The goods it exports become worth more by the net amount of the freight, and when sold abroad, create a claim to money greater than the

[1] Clare, G., *The A.B.C. of the Foreign Exchanges*, new edition by N. Crump London, Macmillan, 1925).

F.O.B. value; while for the imports it is only necessary to pay the price quoted when they are shipped (C. and not I.F.). This may constitute a very important difference in the case of a nation that engages largely in shipping.

Again, services have to be paid for as well as goods. The most important of these that occur in international trade are banking (especially discounting) and insurance: a country that performs such services for other countries acquires a favourable balance on account of them. Not only discounts, but all loans, constitute a service, and are paid for by the interest agreed on.

Another item of account is the board and lodging and other services provided for citizens of a foreign country. This is sometimes of considerable importance; e.g. Switzerland provides holiday accommodation for large numbers of tourists, who bring millions of money with them.

Even voluntary payments may be of importance, as when emigrants, growing prosperous in their new country, send contributions to their friends at home; and a more considerable item of account comes in when a country sends labourers and others to earn money in foreign parts, and eventually return. The sojourn may be for a long or short time: Polish farm workers go to France for a few months, Italians migrate to America to amass a modest fortune, but with every intention of returning to their own land in old age. These loans of labour are closely similar to the loans of capital made by England and France to undeveloped countries, the interest on which constitutes an important part of the payments due to the lenders.

Those items which do not appear in the customs returns are often called invisible imports and exports; clearly they make a large difference to the balance of trade in the narrower sense. Thus, in the years preceding the war, British trade showed a large 'unfavourable' balance, the imports being £700 millions against exports, £560 millions. But Britain was earning about £100

millions a year by shipping services, nearly £200 millions a year as interest on foreign investments, and a good deal in other ways, so that the true balance was largely in the opposite direction, and year by year the rest of the world increased its indebtedness to Britain by an important sum.

Omitting, for the present, loans and repayment of loans, the balance of accounts is made up as follows :

Debit.	*Credit.*
Imports of merchandise.	Exports of merchandise.
Imports of bullion and specie.	Exports of bullion and specie.
Banking and insurance facilities obtained from other countries.	Banking and insurance facilities supplied to other countries.
Interest and profits paid to investors in other countries.	Interest and profits earned by national investors abroad.
Labour hired from abroad.	Labour lent to other countries.
Foreign expenses of the government.	Freight earned by national ships.
Expenses of nationals abroad.	Services rendered to visitors.
Gifts to persons abroad.[1]	Expenses of foreign governments in the country.
	Gifts received.

On the other hand, Canada, a typical ‘ new country ’, had an ‘ unfavourable ’ balance of trade due to other causes—imports, £120 millions, exports, £80 millions. Canada had, in addition, to pay interest on money borrowed (chiefly in England) and profits on enterprises belonging to foreign investors, amounting probably to £30 millions a year. There were no invisible exports of any magnitude, so that the balance of accounts against Canada was not forty, but seventy, millions. Canada, already largely in debt, was adding this sum, yearly, to its indebtedness. Or, to put the matter differently, foreign capitalists considered Canada’s prospects so good that they were willing to invest so much more

[1] A recent writer estimates that immigrants to the United States send £80 millions to £100 millions yearly to their native countries (E. G. Mears, *Econ. Journ.*, vol. 33, p. 340).

in Canadian loans and enterprises every year: that is, they supplied Canada with large quantities of goods on credit.

An intermediate case is that of a country which has borrowed from more advanced parts of the world, but, growing in prosperity, has reached the stage of paying back debt. The United States has recently passed through this stage. In its earlier industrial development it made use of quantities of foreign—chiefly British—capital; it is now a creditor country. Most of the repayment was a part of the extraordinary outburst of prosperity produced by the European war, before the United States itself joined in, but a good deal of debt had been repaid before. In this phase exports have to exceed imports, not only by enough to pay interest on debt, but by the amount of repayment as well, and the trade balance appears 'favourable'.

The items mentioned above all constitute real income and expenditure of the country, just as much as exports and imports of merchandise do. The difference that remains has another character; it represents a change in the capital position of the country, whether in the form of funded obligations or of floating balances of account. The two sides of the account necessarily balance, in the accountant's sense, i. e. if the other items are not equal, a debit or credit balance must be added to make them so.

There is, however, a considerable difference in practice, according as the debit so arising is represented by funded or unfunded obligations; the latter constitute a liability to remit payment either at once or in the immediate future, and so are apt to disturb the exchange market. A funded debt, on the other hand, creates long foreseen obligations, which can be taken into account without difficulty. For example, if a loan is raised in *A* for the benefit of a borrower in *B*—the government of the latter country, a railway, or mercantile company—the subscribers to the loan agree to accept the bonds at a certain price: this is

just as if *B* had sent over an additional export, and helps to balance the exports of *A* to *B*. In other words, it is a way of meeting the claims of *A* for goods, say railway material, supplied; *B* obtains these goods on credit. If the accounts, including this loan, balance, the exchange position will be just the same as between two countries whose dealings consisted in material exports and imports only, and these were of equal value.

On the other hand, if no formal loan is made, but one country has been buying too much from the other, on three months' bills or similar arrangements, a position will soon arise in which the demand for payment in one direction outweighs that in the other, and the currency of the country that has bought too much will be relatively depreciated. When the gold standard is in use in both countries the want of balance between them may be met by shipping gold, and this is the chief use of a gold reserve—it maintains currency free from any notable depreciation in an emergency, at least if it really is used when the emergency arises.

When two countries do not use a common metallic standard of money, so that the money of one, whether gold, silver, or paper, cannot be transformed into money of the other, the relative value of the two currencies depends, fundamentally, on their purchasing power at home. This, in turn, depends on the amount of money existing and the business it has to perform; the resulting purchasing power is shown by means of an index of prices. If then there are records of price index numbers, it is possible to calculate what the rate of exchange between two countries should be, for there cannot be permanently a difference that would enable people to buy more with the same money in one country than in the other—at least of such goods as are freely traded between them.

For instance, if the price of wheat in France were 1,000 francs per ton, and in Italy 1,250 lire per ton, five lire ought to exchange

for four francs; otherwise it would pay to buy wheat in one country, send it to the other for sale, use the proceeds to acquire more of the money of the first, and so on. This is known as the principle of purchasing power parity. If the departure from parity in the case of one article, such as wheat, is small, cost of transport may keep it from being exactly equalized, but opportunities for profitable trade arise in many directions, so that rates of exchange do tend to keep pretty close to parity as estimated by index numbers of general prices, provided these refer to transportable goods. At the same time there are many circumstances which interfere temporarily to raise or lower the value of a country's money. If exports are temporarily in excess foreigners will have to bid up the price of the country's money in order to meet their obligations, while in the contrary case it will fall below parity as reckoned by purchasing power.

This modification in the rate of exchange is a stabilizing influence; it tends to correct the import or export surplus that caused it. Thus, if a country has been buying more than it can afford by the sale of its exports, the local currency will fall in exchange value, and the inhabitants will have to give more of it for imported goods; this, of course, will tend to stop their purchases. Similarly, if through an excess of exports, exchange has turned in favour of the country, its exporters have to put up with a discount on the price of their produce, while imports are cheapened, so that it becomes a good place for the rest of the world to sell to.

If the gold standard is in use in both countries, so that a want of balance of accounts can be adjusted by export of gold, just the same stabilizing effect on values is produced; for in the country that imports gold, money becomes more abundant, both directly, and by the influence of the gold in making banks more ready to grant credit: accordingly prices tend to rise there. In the country that loses gold, prices tend to fall, so in both ways forces

are set up which tend to neutralize the want of balance in accounts that caused the gold to be sent in the first place.

The inequality may be balanced by lending. A country that has an excess of imports it cannot pay for immediately, may arrange to borrow; one that has an excess of exports may use the money to invest abroad. The effect of such arrangements is, for the time, the same as if imports and exports balanced.

In fact all payments due affect the rate of exchange alike, whether they are for consumable goods or the result of capital transactions, and the latter may even, at times, be the more important. The exchanges are considerably influenced by such payments as British investors' subscriptions to foreign loans, the British Government's repayment of war loan to America, German reparations to the Allies. They all tend to lower the value of the money of the payer, and raise that of the recipient.

Speculation can only produce a transient effect on rates of exchange. If a speculator buys a certain currency, and thereby helps to raise its value, he has to sell it again later, and then produces about an equal effect in depressing the value. All that he can do is to anticipate the causes which will raise or lower the rate. In the same way when some political event produces an effect on the exchange market, it is by anticipation. The value of American paper money, which was greatly depreciated during the civil war of 1861–5, jumped, on the announcement of the final victory of the North. This was because speculators concluded that the military success would soon enable the Federal Government to return to a peace-scale of expenditure, and emerge from financial difficulties; they therefore hastened to buy paper-money. The immediate cause of the rise in value lay in the speculative purchases.

9

Theory

The 'quantity theory' deals with the dependence of price on quantity of money: light on it obtained from the price of other durable goods. Theory is simplest when inconvertible paper is used: examples from post-war history. To state the theory correctly, velocity of circulation, also, must be considered.

The fraction of the world's wealth set aside for use as money (the 'unspent margin') is approximately constant: in modern times it mostly takes the form of an abstraction from negotiable securities, which themselves are an abstraction from real wealth.

The supply of money is adapted to slow changes by increase in the stock of gold: by relatively increased use of paper: and by increased velocity of circulation. The changes within the trade cycle involve a rise and fall in the real unspent margin; there is also a marked change in velocity of circulation, which compensates change in the activity of business.

THE most important piece of theory, in connexion with money, is that which attempts to elucidate the purchasing power of money or the general level of prices, and trace the dependence on the amount of money in use. This is known as the 'Quantity theory'. It was stated, originally, in a simple form suitable to a community in which money meant coins of precious metal. Although, in the western world, we have moved far from that state of things, it will be well, first, to try and get clear what happens in the simple case.

In order to see how a change in the quantity of gold or silver affects its value, let us ask the same question about other durable goods. If the stock of platinum were increased from one ton to ten we should certainly be better off; the increased supply would be absorbed by the many uses of the metal, such as for electric wire, for laboratory vessels, and so on. The sum of the utilities served would be greatly increased, and while the price

of platinum would fall, it would certainly not fall tenfold, and the total selling value of the stock would be greater than before.

Next, suppose the stock of emeralds to be increased tenfold. Emeralds are valued for their scarcity, and we may assume them to have no use except as ornaments; comparative commonness would throw them out of fashion, and it is quite possible that the price would drop so violently that ten tons would be worth less than one ton was previously.

In the case of gold, if we set aside the industrial uses for the moment, an increased stock neither adds to, nor takes away from, the utility served. Money serves to effect the exchange of commodities, whether there be much or little of it; ten tons of gold will not do the work any better or worse than one ton. Hence the increase in quantity would bring about just an equal fall in price—but for the fact that more would be used in jewellery and other non-monetary ways. When money means paper notes there is not even this disturbing circumstance, and the value of the unit may be expected to vary inversely as the number of units issued.

When one attempts to obtain historical confirmation of such a conclusion as this the trouble is to disentangle the complexity of causes acting together; still, history does confirm theory. If the history of the production of gold, as sketched in Chapter 2, be compared with that of prices, in Chapter 5, the broad agreement will be seen, and detailed numerical comparison strengthens the conclusion. More striking instances can be found when paper money is used, because it is possible to alter the amount with a rapidity impossible in the case of gold. The late war has provided specially valuable material; by choosing non-belligerent states we may feel confident that the other economic circumstances have not altered so much as to obscure the deduction, and at the same time we have monetary changes so great as to afford the most remarkable illustration of the quantity theory.

Thus, in Switzerland, before the war, the currency consisted of 314 million francs of notes, some gold (estimated by United States Mint at 60 millions), and about 80 millions in silver and subsidiary coins: total, 454. In 1922 the average circulation was 846 millions, with a reduced amount of silver—say 920 in all. This is an increase practically to double, whilst the level of wholesale prices in 1922 was one and two-thirds times that of 1913.

In Norway inflation went somewhat further; 105 million kroner in notes and 35 in gold and silver have been replaced by 380 in notes and a little silver, say 10 millions. The expansion is thus in the ratio of one to 2·7, whilst prices have risen in the ratio of one to 2·3.

In Finland great inflation took place during the war, but afterwards a stationary condition of the currency was attained, with 1,400 million francs of notes in circulation (no gold or silver). This takes the place of 113 millions in notes and probably some 20 in gold and silver, before the war. The increase is a little more than tenfold. Wholesale prices have risen eleven times.

It will be gathered from these instances that the strongest influence on prices is that exercised by quantity of money, though there are other circumstances that keep the price-level from being exactly proportional to the quantity in circulation.

When money consists of inconvertible paper, it is easy to see that the value of the unit can be adjusted at will, by varying the number of units issued, and the examples of Germany and Russia after the Great War bring home to one the extremity to which the process can go. When money is on a gold basis it might seem at first sight that nothing of the sort could happen, and that money must be regulated in value by the cost of mining gold. It is true that a single country cannot, without departing from convertibility, make much difference to the value of its money; the whole gold-using group must be considered together. The

money whose quantity regulates its value is not merely gold coin, nor even gold and legal tender notes, but includes bank credit as well—all means of payment, in fact. Now, the gold-using group of states may raise a larger superstructure of paper and credit money on the same stock of gold; the greater number of units of money so created will cause the value of the unit to fall, even if the unit be a gold coin. This is just what happened as a result of the war; gold fell to about two-thirds of its previous value.

To extend the use of paper-money is a legitimate economy; indeed, if it had not been introduced, the great increase in the world's trade during the last two centuries would have made the precious metals most inconveniently scarce; what was embarrassing in the war changes was their suddenness. If we accept the general conclusion that steadiness of price-level is the ideal, we should aim at a gradual development of paper substitutes for gold, just sufficient to provide for the needs of increasing population and wealth.

The same money can be made to do a greater amount of business if it be used more actively. It is necessary to take this into account, and it is customary to define the velocity of circulation as the number of times a piece of money passes from hand to hand in a year. An increase in velocity of circulation, then, will serve instead of more money. But the velocity of circulation depends on the monetary habits of the people, and is not readily changed. It grows slowly as a consequence of improvement in transport and communication; thus a farmer needs to keep a good deal of money by him to pay wages and expenses. If better transport enables him to get at a bank readily, he need not keep so much on hand, or in other words a smaller amount of money can be made to circulate more rapidly and do the work formerly done by a larger amount. In the exceptional event of rapid inflation every one wants to hold goods rather than depreciat-

ing money, so velocity of circulation becomes abnormally high. In Mr. Keynes's picturesque language:

'In Moscow unwillingness to hold money except for the shortest possible time reaches a fantastic intensity. If you buy a pound of cheese in a grocer's shop, the grocer runs off with the roubles as fast as his legs will carry him to the central market to replenish his stocks by changing them into cheese again, lest they lose their value before he gets there. This is what keeps the new *bourgeoisie* so thin, and justifies the prevision of economists in naming the phenomenon "velocity of circulation". In Vienna mushroom exchange banks have sprung up at every street corner, where you can exchange your krone into Zurich francs within a few minutes of receiving them, and so avoid the risk of loss during the time it will take you to reach your usual bank'.

Apart from such extraordinary situations, habits with regard to money change but slowly, and changes in velocity of circulation need not be regarded as greatly modifying the conclusion drawn as to the influence of the quantity of money on prices. The chief qualification relates to the changes within the trade cycle, and will be considered later.

Another way of describing the relations of money to price takes one, perhaps, more deeply into the reality of the matter; it will at least have the advantage of showing up the facts in another aspect. Money is a part of wealth which is set aside from other uses for the sake of its universal acceptability. The reason for keeping a part of one's resources in this form is to be able to buy things at a moment's notice, and especially to be able to take advantage of a bargain; the reason for not keeping a larger fraction of resources in the form of money is that it does not yield any profit. Every one, therefore, settles down to some custom in the matter; if he finds he has too much money on hand, he invests some of it, if too little, he tries to replenish the store by selling investments or by borrowing. The total amount of the 'unspent margin'—to use Mr. Hawtrey's suggestive

phrase—bears a close relation to the total wealth of the community.

People used to provide this margin of immediately available purchasing power by keeping pieces of gold and silver at hand. These serve the purpose, because everybody is glad to have them. So long as they are kept, they yield no profit, though the monetary convenience is sometimes supplemented by utilities of a more human kind, such as the satisfaction of gloating over evidence of wealth, or of seeing its decorative effect on the persons of the women of the family. In our more prosaic communities the object is attained with less work than is required to dig up the necessary precious metal, by the device of banks and credit-money described in Chapter 4.

The world contains a quantity of real wealth, fields, houses, ships, machinery, stocks of corn, and so on. These, however, are unwieldy things to transfer, and consequently it has been found convenient to create a second, or representative, world of titles to real wealth, title-deeds, mortgages, debentures, shares, bills of exchange, and the like. Not all real wealth is so represented; furniture and clothes are not, except in rare instances, but much the larger portion is, and thereby attains a degree of negotiability that was unknown in earlier times. Wealth is not, in this way, increased in amount, but it is rendered more available in case transfer, i. e. trade, is desired.

Since not even debentures or bills of exchange possess that universal acceptability which constitutes money, a second stage of abstraction has been created out of the first. Banks have been instituted whose financial standing is so good that their credit comes to constitute credit-money. But bank credit is not created out of nothing; it is derived from the real wealth belonging either to the shareholders or the customers of the bank. The process varies in detail as appears from the variety of assets held by the bank. Thus, the shareholders' capital may be used to

buy stocks or bills of exchange; deposits may be used in the same way, and other deposits may be constituted by loan, on the security of stocks or bonds pledged by the customer; but the essence of the matter is that a portion of the wealth existing under the form of negotiable paper is re-represented in the form of credit-money. And whereas the stocks and bills are not generally enough acceptable to serve as a means of payment, this emanation of value derived from them is.

The process of abstraction involves a loss of individuality, and this is a gain for the purpose in view. Buildings and machinery are so individual that it is not easy to find a purchaser for them, but shares in a manufacturing company owning buildings and machinery are all like each other, and are easily saleable on the Stock Exchange. But different companies have their individualities, so that their shares are not indifferently interchangeable; they may all be pledged or sold to obtain bank credit, however, and there is no difference in quality remaining between the portions of bank credit so obtained: these possess quantity only, and may all be used indifferently as general purchasing power, i. e. as money.

The function of creating credit-money is also undertaken by governments, but its essential character is the same: their credit is a mortgage on all the real wealth in the country, exercisable through the taxing power. When a government issues paper money it is not creating something out of nothing any more than a bank, only the assets against which the issue is made are not always so well defined; they are so if the government is careful only to issue notes to the extent of the gold and securities dedicated to that purpose, but governments do not always exercise such self-restraint.

The real wealth of the world increases steadily (except for such an interruption as the late war), so that an increase in the stock of money is needed. This is provided partly by the output of

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gold, partly by greater economy in the use of gold, i. e. by a relatively greater employment of paper money; and these two methods are supplemented by a slight increase in the velocity of circulation. Normally the supply of gold has been the chief factor, but this supply, being dependent on accidents of discovery, cannot be relied on to increase at a steady rate. During the nineteenth century it did, on the whole, about keep pace with the growth of the world's demand, but sometimes the increase was too fast, as in the last years of the century, and then prices rose; sometimes too slow, as in the 'seventies and 'eighties, when the value of gold was forced up and prices declined. It is, of course, impossible to say what will happen in the future if the supply of money is left to the accidents of mining. But it could be controlled if society were alive to the importance of a satisfactory monetary system, and it looks as if more conscious effort would be devoted to it than formerly.

The changes occurring within the trade cycle are also of great importance; they form the principal exception to the rule that the resources set aside for use as money form a constant fraction of wealth. When business is optimistic, people want goods rather than money. That is, they feel there are such opportunities for profitable business that they want to keep as little as possible of their possessions idle. It is true that during the rising phase of the cycle the demand for credit is great; this looks like a contradiction, but it is not: the number of units of money increases, but the purchasing power of the unit falls so much that the total value of the money is actually less: it forms a smaller fraction of the total wealth of the country. Conversely, in a time of crisis, possession of actual money is of so much importance that people readily sacrifice goods in order to get it; the preference for money drives up its value, i. e. drives down the level of prices. In the subsequent depression this state of things continues, because, owing to the difficulty of finding profitable

occupations, the motive for keeping a large unspent margin is strengthened.

The trade boom does not consist merely in a good level of production, and freedom from unemployment; rather it is a phase subsequent to that, when rise in prices and overestimate of the future lead to a vast amount of speculative business. There is, therefore, a far greater increase in sales than in production, especially when organized produce and stock exchanges offer facilities for dealing. This is met by a corresponding increase in the circulation of money, particularly in the form of cheques. There is an increase, perhaps, of a few per cent. in the amount of bank deposits, but a far greater increase in cheques drawn; the deposits are turned over from hand to hand with greater rapidity, because every one is anxious to do business. This forces up prices as much as if the stock of money were increased in the same ratio. The extremely violent boom and slump of 1919–21 show this effect; it was not so much the increase in bank deposits that forced up prices (see diagram, p. 63) as the more frequent use to which they were put; and when the precipitous fall came, it did not involve much reduction in deposits, but the utilization of them dropped to a normal level.

The quantity theory has sometimes been doubted because of facts like this; the theory is true, however, and indeed is the only clue to the intricacies of monetary relations; but it needs stating with care and precision. The influence of velocity of circulation must be allowed for as much as that of quantity of money.

The principal conclusions arrived at may be summarized as follows:

1. The fraction of wealth set aside for use as money is approximately constant.

2. The velocity of circulation of money shows only a very slight secular tendency to increase.

3. During the phase of depression in the trade cycle a larger fraction of wealth than usual is kept in the form of money, and in the phase of speculative activity a smaller fraction than usual.

4. The velocity of circulation falls below the average during the depression, and rises above it in the speculative phase.

10

Suggestions for Improvement

The present money has defects due both to slow and quick fluctuations in value. It has been proposed to remedy them by :

(i) *The use of an index-number standard.*
(ii) *Irving Fisher's ' compensated dollar '.*
(iii) *Control of the output of gold.*
(iv) *Regulation through central banks' policy.*
(v) *Abandonment of the use of gold.*

There are also many quack remedies, not considered here.

The present national organization of money may be expected to develop into an international system : the Genoa Conference made suggestions as to the line of evolution.

To most people the interest in the science of economics lies in the fact that it leads to an art of economics ; they do not want knowledge for its own sake, so much as in order to deal with practical problems. In the case of monetary economics, the problem is to improve the system of money, which so far has grown up without much conscious purpose. It is by no means without faults, as the considerations of Chapter 6 show. To remedy these, sound diagnosis is the first need.

Fortunately, the general aim may be stated quite simply : it is to get money of constant value. This statement does not clear away all the difficulties, it is true. For one thing the notion of constant value can only be rendered definite by the device of index numbers, and we have seen that they present difficulties

of their own. Again, we may have to choose between constancy of internal prices, and steadiness of exchange with foreign countries. Without, however, facing all the intricacies of the subject, we may distinguish the chief defects that have come to light in recent experience, and consider some of the suggestions that have been made to overcome them.

In going over the history of prices in England, three causes of variation were distinguished. One of these is the waging of great wars, the evil effects of which can only be avoided by not making war; the other two are of a monetary character. There are the slow changes due to variation in the supply of fresh gold from the mines, and the relatively rapid changes, partly psychological in origin, which constitute the trade cycle. The former cause larger changes in price level, but as they come slowly they are perhaps less injurious than the limited but quick movements of good and bad trade. Still it would be better to avoid them; the unfairness they introduce into long period contracts, such as national debts, was discussed above. Further, a long continuance of falling prices causes depression in trade; this was the subject of much complaint in the last quarter of the nineteenth century, especially with regard to agriculture, an industry that does not adapt itself readily to changing conditions. Long continued rising prices render more difficult the improvement in the status of the poorer classes, which is one of the great aims of social advance.

The fluctuations of the trade cycle have obvious bad effects, of which the worst is unemployment. On the whole there is hardly a doubt that money of nearly invariable value would be best. A moment must be devoted to one other suggestion; business men, to whom rising prices are a stimulus, sometimes think that to arrange for prices to go on rising perpetually would bring perpetual prosperity; this is a confusion of thought. The business man gains advantage from rising prices—largely at the

expense of other sections of the community—just on account of the impossibility of foreseeing them with certainty; to arrange the monetary system in such a way that every one knew prices would rise would stultify the effect; workmen would want higher wages, landowners more rent, and bondholders more interest, so that the adventitious gain to the business man would vanish, and there would be no special stimulus to enterprise. Putting that aside, we may proceed to consider how prices may be made more constant.

It was proposed a good many years ago, that as gold is not really constant in value, it might be replaced, as a standard, by a collection of more important goods; in fact, that the index number method should be followed in choosing a standard of value. According to this plan, a contract might be, not to repay a certain weight of gold, but so much gold as would buy a certain amount of goods. Of course, so complicated a plan was not suggested for ordinary small transactions; but it might be useful when a large loan at long date was negotiated. It would serve to avoid such consequences of price change as were referred to (p. 69) when a government borrows to construct an important public work. Even then the suggestion would hardly be practical, as it would take the ordinary business man somewhat out of his depth in money matters, and make the loan unpopular.

The original proposal has been developed into a practical working scheme by Professor Irving Fisher, who shows a way of carrying out the index number method, without the public being so much as aware that it is being done. He would adopt a currency in which the gold coins or notes, whichever were used, were redeemable in bullion, not by a fixed weight of metal, but by a weight adjusted to represent a fixed value of goods. The public would use the coins or notes just as they do now, for all transactions (cheques payable in such money would be used as at present). Only if any one wanted gold for export, for manu-

facturing, or for hoarding, would there be a difference. The dollar would not mean 1·50467 grammes of gold, as at present, but a greater or smaller weight, according as gold had become less or more valuable in terms of goods. There would be an official index number, calculated by an independent and impartial office, and the authority issuing the money, treasury or central bank, would be bound to exchange money for bullion, or bullion for money, at the rate calculated by the index number office. Thus the dollar would always buy the same amount of goods, while at the same time gold bullion could be had for the purposes of foreign trade, on demand. If gold coins were still used they would have to be token coins, i. e. contain less gold than the standard quantity, for obviously no one would exchange a gold coin against a weight of bullion less than itself; if he wanted bullion he could melt it down. But probably gold coins would not be used; paper money would serve for home business, and gold be reserved for export. Of course, other countries could adopt the same plan, and no doubt it would work more smoothly the more generally it was adopted.

Fisher's scheme is a corrective rather for the slow than for the rapid changes in price level; of late years attention has been drawn to the overissue of paper money, consequent on the war, and to the evils of the trade cycle. The general feeling has been a desire to get back to the comparatively satisfactory state of things existing before 1914; until that is accomplished, there is not much thought for such problems as gave rise to Fisher's proposals, which were first published in 1911. But undoubtedly the world will need, not only to restore earlier conditions, but to improve on them; and in time Professor Fisher's plan, which is both practicable and useful, will come in for consideration.

The desired influence on the slower changes in value could be attained without any system that would disconcert the commercial world by its novelty, if the output of gold could be adjusted

consciously to the need for it. The output would have to be placed under the control of some authority that could take long views, and act in the interest of the world, instead of that of shareholders in the mines. There is nothing impossible in such a proposal in these days of trusts; only the controlling body would have to be representative of governments, whereas the ordinary trust is based on private gain. Proposals of this kind have been put forward by Dr. B. M. Anderson, and by the present writer. They are too much in the clouds, at present, to need discussion here. They would not control the quick changes that come of changes in the demand for gold, but they would retain the good features of the simple gold standard, while providing a very straightforward way of eliminating its principal defect.

A good deal of regulation is done already. Before 1914 the Bank of England was called upon to see that Britain retained enough gold to assure the working of the gold standard. This meant that, when a considerable outflow of gold took place, the value of the currency had to be raised by a reduction in the amount of credit money. The bank raised its rate of discount, so as to influence the commercial banks to restrict the granting of credit to customers; and reinforced its action by selling securities, and so gathering in some of the floating supply of money.

This is the way national money is kept equal in value with gold, a condition necessary to the maintenance of the gold standard. After the war the Bank of England continued to use the regulation of the bank rate, and the purchase and sale of securities, with the object of keeping sterling approximately constant in purchasing power, although it was depreciated relatively to gold. It has become clear that the familiar methods of regulation have an important use in avoiding the smaller and more rapid fluctuations in prices; they can be applied all the more effectively if there is an understanding between the monetary authorities of

the leading countries, especially Britain and America. This kind of regulation is helped by the use of the gold standard, as the mass of monetary gold acts as a reservoir of value. There is no reason why detailed regulation by the central bank should not be combined with control of the gold output as suggested above.

Mr. J. M. Keynes, however, goes even farther, and boldly proposes a 'managed paper currency' exclusively, and the abandonment of the gold standard.[1] It is theoretically possible to maintain a satisfactory money system in this way, but it may be doubted whether even under the most responsible governments the authorities in charge of the currency are yet worthy of such complete trust as would be needed.

This sketch of present day monetary problems, brief though it is, will show that the theory of money is not a closed book. It is not a branch of learning in which everything has been said (if there is such a branch), and in which it is only necessary to learn what the masters have taught. The theory is solidly based on the work of the classical economists, but its subject-matter changes as the world's progress needs new developments in the means of exchange. Hence new applications of theory for the full understanding of the situations that arise. The abandonment of the gold standard, under stress of war, was a retrograde step; nevertheless, it stimulated fresh and deeper investigation, and may lead in the end to a higher stage in the organizing of money.

Of monetary proposals there is no end. We have only mentioned those based on a sound knowledge of theory; there are many more which are of the nature of quack remedies—the product of hasty thinking. These are usually inflationary in tone. The authors reason somewhat in this way: each person attains

1 John Maynard Keynes, *A Tract on Monetary Reform: constructive proposals for the future regulation of currency and credit, etc.*, p. 222. London, Macmillan, Dec., 1923.

prosperity by having plenty of money, therefore if plenty of money is supplied to everybody, general prosperity will be assured. They proceed, therefore, to schemes for supplying money by the printing press, or by the credit of a State bank. Probably the real strength of such money cranks lies in an unconscious appeal to the debtor classes; their schemes would raise prices, and so make it easier to pay off mortgage and other loans. Such schemes often get the sympathy of the workpeople, owing to a vague dislike of 'the moneyed classes', which is unfortunate, as the true interests of the workpeople lie on the other side (Chapter 6).

Some of these writers have found out that money can be based on credit. They blithely suppose this to be a new discovery, and work out plans for using the national credit to supply every one with abundance of money, and so achieve independance of the supposed sinister power of banks. This is an excellent illustration of the adage that 'a little learning is a dangerous thing'. Further study might show them that the use of the national credit to issue money is not a new thing, and that the trouble has been to keep such money-creation from causing disaster.

The present organization of money, which is on a national basis, can only be looked upon as a phase of history, destined to pass into a higher one. Money exercises a world-wide function that should not be restricted by national frontiers. There are many organs of civilization that transcend the nation, and these are growing steadily in importance. Hardly the most ardent nationalist would suppose the glory of his country to be enhanced by secession from the Universal Postal Union; patriots, as well as others, suffer from lack of the international regulation of epidemics, which the Health Department of the League of Nations is now trying to supply. In the same way no one need object to the internationalization of money, when that becomes possible.

At the same time, there would be nothing gained by an attempt to introduce an international currency yet. The line of progress

is to perfect the existing national currencies: to bring them into more stable relations with each other, and gradually to facilitate the adoption of a common unit and free transfer.

Funds have long been remitted without cost throughout England. In the much larger area of the United States, until recently, commission used to be charged on cheques drawn at a distant place, but the introduction of the Federal Reserve system led in 1916 to a plan for payment at par, which has become general. A time will certainly come, with improved banking organization and cheapened transport, when remittance of money across the world will not cost more than it does at present across a single country.

The immediate future of monetary organization was the subject of discussion at the Genoa International Conference of 1922, and the resolutions adopted there give a good indication of what is practicable. The Conference looked forward to the re-establishment of the gold standard, either by devaluation or by deflation, in those countries which had departed from it. This was regarded as a first step needed to emerge from the chaotic state left by the war, it being the only common standard that European countries could at present agree to accept. Next, co-operation between central banks was to be instituted; to facilitate foreign payments the banks were to keep reserves in the form of balances in and bills on foreign centres (in practice this would mean in London and New York, these cities acting as clearing houses, London being the more suitable for European trade). Participants were to maintain convertibility and a free market in gold, and as a sanction to ensure this, a defaulting State was to be debarred from the right to hold reserve balances with the central banks of the other participating countries. Further, the central banks were to adopt a policy tending to avoid undue fluctuations in the purchasing power of gold.

If these aims are pursued successfully, the monetary systems

of the civilized world will come to form a coherent whole; we shall be on the way towards a time when the payments necessary to commerce throughout the world will be carried out with as much smoothness and unconsciousness as in the home trade of England during the century before the Great War. Then perhaps the study of monetary theory will drop into the background.

SOME BOOKS RECOMMENDED

The literature of money is vast, and even a bibliographical guide to it would be a great work. The list below is merely of a few books of outstanding quality that might sustain the interest of readers who have come thus far.

Ricardo, D.: *Economic Essays* (1811–16), new edition, London, Bell, pp. 305.

Bagehot, W.: *Lombard Street* (1873), new edition, London, Smith Elder, pp. 348.

Walker, F. A.: *Money* (1878), London, Macmillan, pp. 550.

Withers, H.: *Meaning of Money* (1909), London, Smith Elder, pp. 306.

Marshall, A.: *Money, Credit, and Commerce* (1923), London, Macmillan, pp. 369.

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